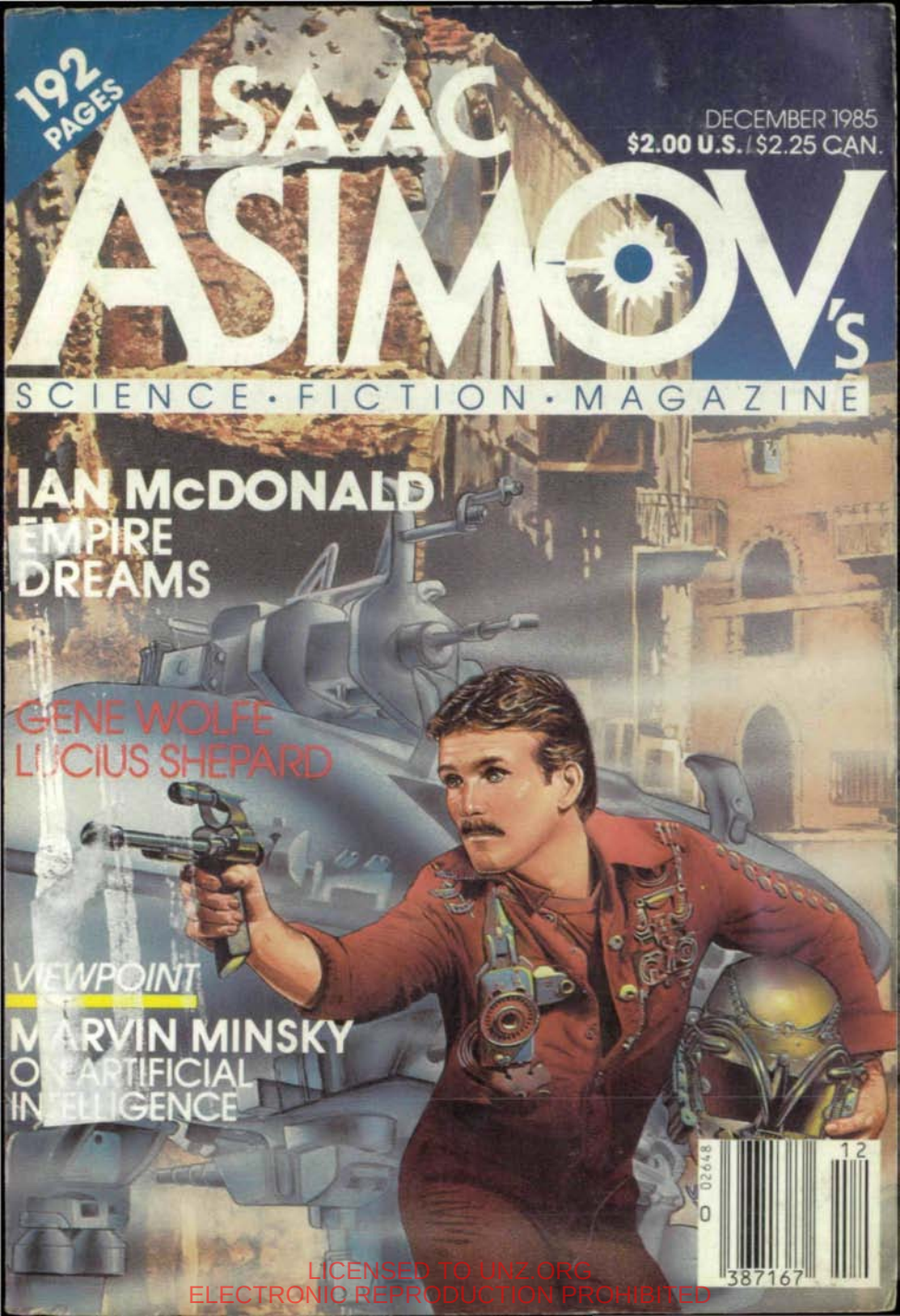

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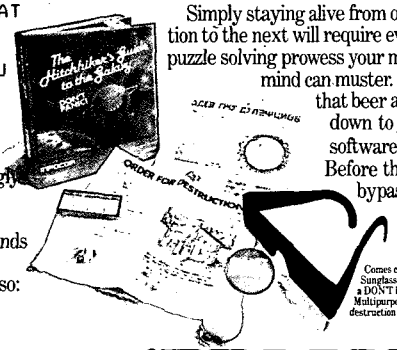

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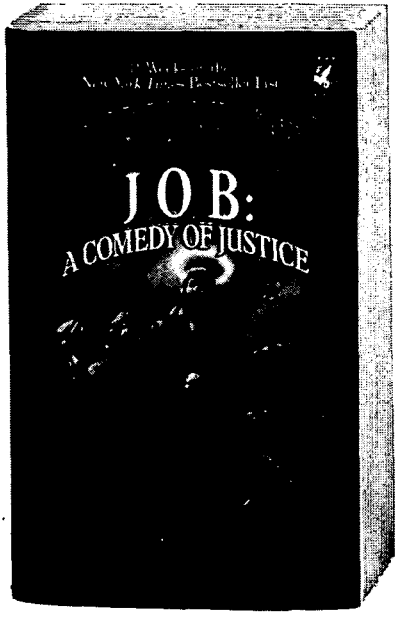

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116

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Vol. 9 No. 12 (whole no. 98)
December 1985
Next issue on sale
November 19, 1985

Novelettes

54 Empire Dreams — Ian McDonald
80 The War of the Roses — Karen Joy Fowler
158 Meadows of Light — Sydney J. Van Scyoc

Short Stories

106 O Little Town of Bethlehem II — Robert F. Young
116 "... How My Heart Breaks When I Sing This Song ..." — Lucius Shepard
132 The Nebraskan and the Nereid — Gene Wolfe
142 Boulevard Life — Robert Charles Wilson

Departments

3 Editorial: Civil War — Isaac Asimov
10 Letters
20 Gaming — Dana Lombardy
24 Bull's-Eyes and Pratfalls — Martin Gardner
28 Viewpoint: Toward Artificial Intelligence — Marvin Minsky
53 Mooney's Module — Gerry Mooney
183 On Books — Baird Searles
192 The SF Conventional Calendar — Erwin S. Strauss

Cover art for "Empire Dreams" by Val Lakey Lindahn
Poems by Suzette Haden Elgin and Robert Frazier

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EDITORIAL

CIVIL WAR

by Isaac Asimov

Science fiction writers have always disagreed among themselves over issues of the day, in and out of science fiction itself. Why not? They are thinking people and thinking people are bound to disagree on this or that. What is more, they tend to be creative, articulate, and, in many cases, cantankerous people, and the disagreements can be loud and boisterous.

On controversial issues within science fiction, I remember some particularly grim disagreements. I'm thinking of John Campbell's last decades when he took up such peculiar causes as psi powers, dianetics, the Dean drive, the Hieronymus machine and so on. There was always the possibility that the Campbell market (the best in science fiction) might be harder to crack for a writer if his opposition to these bits of curiosa were too loud, but that didn't stop a number of writers from speaking up in opposition to Campbell's views.

However, these disagreements interested only science fiction people and the tempests, however stormy, were in an invisibly-small teacup as far as the rest of the world was concerned.

There were, of course, disagreements on world issues, too, among science fiction writers and readers. During the 1930s, there were, I am sure, science fiction writers who were more anti-Fascist than anti-Communist, some who were more anti-Communist than anti-Fascist, and some who were isolationist and bade the rest of the world go to Hades. In 1938, New York City fandom was riven in two and a portion of the science fiction society was evicted for being too vocally anti-Fascist. The expelled portion promptly formed a group commonly referred to as "the Futurians," and it became the most unusual science fiction fan club in history. The majority of its members went on to become important names in the world of professional science fiction. (Yes, I was an early member, though I joined after the expulsion had taken place.)

Perhaps the most divisive issue afflicting the field, among those issues that had nothing to do with science fiction itself, came in the 1960s. The Vietnam War, which tore apart the American people more bitterly than anything since the Civil War, tore apart science

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fiction writerdom as well. Why not? We, too, are the people.

It went so far that, at one time, one of the science fiction magazines ran two competing full-page advertisements; one calling for an end to the Vietnam War and the withdrawal of all American troops, and one calling for the vigorous prosecution of the Vietnam War to victory. Each was signed by a long list of science fiction writers, and I was on the side of withdrawal.

My own point of view was a simple one. I harked back to the statement of the shrewd (if unprincipled) Joseph Fouchet, who headed Napoleon's secret police, and who said of the illegal execution of the Duc d'Enghien, carried through at Napoleon's order, "It was worse than a crime, it was a blunder." So I said, in a letter I wrote at the time, "I am against the Vietnam War, not because it is an unjust and immoral war, something that is always a matter of dispute; but because it is a *stupid* war, something that is beyond dispute." Almost everyone agrees with me *now*, but that is cold comfort.

At the time, however, no one outside the science fiction field took notice of our own Homeric struggle. No one cared. After all, we were just a bunch of science fiction writers.

But now we are making headlines.

Some time ago, The New York *Times* ran an article on the fact that science fiction writers disagreed on Reagan's "Star Wars"

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(*Asimov's*, June 1984)

Best Short Story

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Best Semi-Prozine

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project. I was quoted against it and Jerry Pournelle was quoted for it and both of us had our photos prominently displayed. What followed rather took me aback—for I didn't expect it. I began to be called by reporters who wanted to interview me on "Star Wars," by publications who wanted me to write on "Star Wars," and so on.

I was eventually interviewed by Peter Rowe of the San Diego *Union*, who crossed the continent to do it, and in the Sunday edition of April 21, 1985, there was a prominent article headlined "The dizzying Star Wars debate" with the subheadline, "Angry sci-fi [sic] writers argue"—and there is my photograph, looking as handsome as a movie star. I am quoted extensively, with Arthur Clarke on my side and with Jerry Pournelle, Robert Heinlein and others on the other side.

The disagreement seems to be as deep and emotional as it was over the Vietnam War, but this time the civil war among science fiction writers is making headlines and is being featured prominently in the press. Why?

Two reasons. First, and more generally, science fiction writers have been growing more newsworthy steadily over the years. We are no longer laughable little people writing for obscure magazines with peculiar names. A number of us, such as Heinlein, Clarke, Herbert, McCaffrey, and others—even I—have been turning out best-sellers and have been sweeping in big bucks, and that impresses the public far more than the fact that each of us is full of brains and beauty.

Secondly, Reagan's "Star Wars" seems to be peculiarly science fiction in origin. According to the article in the San Diego *Union* an organization headed by Jerry Pournelle and called "The Citizens Advisory Council for National Space Policy" sent Reagan a communication in 1981, a year and a half before his "Star Wars" speech, calling for space-based anti-missile defenses. The article doesn't say that Reagan derived his idea from this communication, but it strikes me that he might have been influenced by it.

If so, I can only hope that this won't be held against us when the "Star Wars" madness finally collapses (as, in my opinion, it eventually must).

Now we come to the part that really bothers me. Until now, none of the disagreements over issues, whether science fiction in nature or not, has seemed to become personal. I bitterly disagreed with Campbell over his fringe-enthusiasms but remained his close personal friend to the end of his life. I have disagreed with Heinlein and Poul Anderson on political views for forty years now, but this has not affected my friendship, during all those decades, with either one. Pournelle's Viewpoint article in this magazine goaded me into an answering editorial, as did Anderson's, and I can't easily imagine how I could disagree with anyone more intensely and emotionally

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ONE.

SCIENCE FICTION
MICROBOOKS (See page 11)
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than I disagree with Pournelle, but when I meet Jerry we greet each other amicably.

I think this is important. In any civilized society, disagreements must be talked out, not beaten out. The disagreement is with the *views*, not with the person. The aim is to persuade, not to destroy.

But now blood is being drawn. According to the *Union* article, Arthur Clarke argued against "Star Wars" at a meeting of Pournelle's council and was shouted down. He was told that it was presumptuous for him to try to tell the United States what to do when he was not an American citizen.

That was a horrible thing to say for a number of reasons.

1) Arthur is one of *us* and who can be aware of the importance of viewing humanity as a whole, if science fiction people do not. It is we who are forever speaking of "Earthmen" and "Terrans." Is it for us now to deify the little splinter groups that separate us into suspicious, hating, warring factions?

2) Arthur has specifically been asked his opinion on space matters. More than once he has testified before committees of the Congress. No one questioned the nature of his citizenship on these occasions.

3) The United States is encouraging Europeans to speak up on behalf of "Star Wars" and to lobby Congress in its favor. Have they the right to speak in favor but not against?

4) "Star Wars," and all matters involved in nuclear war, affect the whole world. If the United States does something which might increase the possibilities of nuclear war, that will affect, and possibly destroy, every nation, not merely ourselves. In fact, if "Star Wars" should merely savage our economy that, too, will affect every nation. Must foreigners nevertheless cower in a corner and wait for possible destruction without daring to say a word?

5) Is this a general rule? Has no one the right to criticize, or even discuss the policies of a nation unless he is a citizen of that nation? If so, by what right do Americans constantly berate the Soviet Union for *their* internal policies, and *their* military plans? None of us are Soviet citizens. For that matter, what gives Reagan the right to call the Soviet Union an "evil empire?" He is not a Soviet citizen.

I hope the newspaper mis-reported the event. I hope whoever made that crude and Neanderthal remark (if, indeed, it was made) did so only in the momentary heat of debate and apologized afterward.

If not, then Arthur was greatly wronged and I regret that bitterly. ●

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TWO.

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SCIENCE FICTION
MICROBOOKS

(See page 11)

LETTERS

Dear Isaac and Shawna,

A couple of days after I had received the March issue, I had the entire issue read. Your magazine generally provides me with two to three hours of enjoyment. I only wish it would come more often or be twice as long. I generally start at the beginning and read all the way to the last page. When I don't have enough time I read these sections first: the editorial, letters to the editor and Martin Gardner's brain teaser. I generally skip the section on games. As long as I enjoy the majority of the stories you publish, I will remain a faithful subscriber.

The amount of time and effort Shawna has to put into the slush pile is directly proportional to the number of printable manuscripts she receives in any given month. Once she has a stable of writers who consistently submit printable stories, there is no need for her to encourage amateur writers, like myself, whose stories need a lot of editing. For myself I have enrolled myself in a correspondence course. In a few months I hope to be sending you a few stories.

A few letter writers have complained about the religious content of some of the stories you print. My explanation for this phenomenon is that most of the writers have either a Protestant or Catholic background. Since this is the religion that they are most familiar with, it is the one that they write about. It is easier to pick on Christianity than to defend it.

Sincerely,

Rodney T. Cape
Bridgeport, NE

Actually, to put things in the proper perspective, if one places all the defenses of religion in one box and all the attacks in another, one will find the defenses outweigh the attacks at least a hundred to one. The number of religious books published each year, to say nothing of sermons, lectures, tracts, etc. is little short of prodigious and their readership is enormous. What's more, the defense is usually full of unbridled and extreme sincerity, while attacks tend to be a little tentative and nervous. Why some people should feel threatened by the attacks under these circumstances puzzles me.

—Isaac Asimov

Dear Sir:

I have recently begun reading your magazine and find it truly interesting, informative, and entertaining.

The discussion of sex in the

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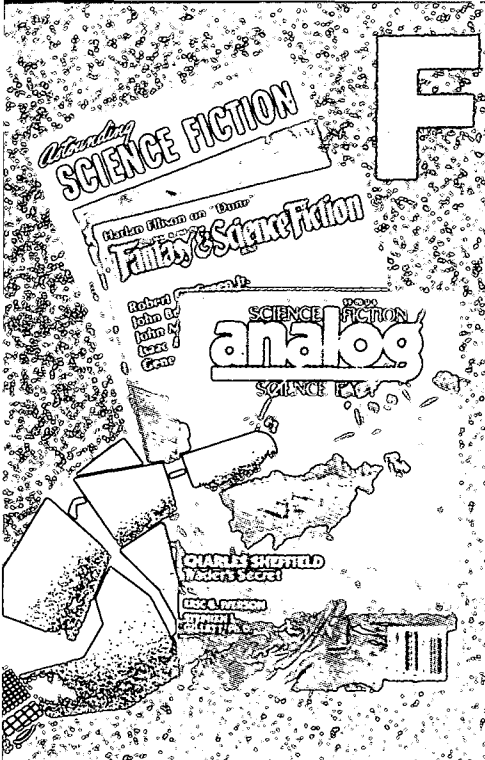

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March, 1985 Letters left me with a burning desire (I could end the sentence here) to make my comments. Over the past few years I have read an average of 150 sci fi/fantasy books each year. I prefer stories that are current, realistic (or magical in the case of fantasy) and contain a decent amount of technology (especially computers, as I am a programmer). I own over 200 of those which pleased me the most, only one of which was written by Dr. Asimov (wouldn't you know it would be *Robots of Dawn*?).

Too many of the sci fi books (especially Dr. Asimov's) are crammed full of terrific technology but remain dry as far as the human condition and plot go. I think McCaffrey's books (the Dragon series, *Crystal Singer,* and *The Ship Who Sang*) rate number one and Dickson's (The Childe Cycle) number two as far as their treatment of people. McCaffrey's contained moderate sex (very well done, I might add), Dickson's lightly touched the subject while Major's (*The Alien Trace*) was fairly heavy with sex in his attempt to get the nature of his beasties across to the reader. I own each of these mentioned books as I liked them very much.

The point is, when a fictional hero has no human condition (never gets sick and vomits, never goes to the bathroom, never hurts himself, scratches, shivers, sweats, sneezes, coughs or eats and never reveals any sexual thoughts or behavior not to mention that he exhibits Boy Scout qualities, looks like a Greek God and never makes mistakes) then he is just that: fiction. No realism at all about him. Flat. Dry.

The other aspect of science fiction sexuality, that of robots and humans involved in a little heing and sheing, is equally interesting. It is obvious to me that the future robots will be very life-like. If our capitalistic society survives that long, you'd better believe that there will be companies who provide robots for personal functions and, people being as they are, those robots will be hot sellers. Robots have to be better than rubber dolls, vibrators, and manual labor. I also sense that, at first, it will be either illegal or immoral to involve oneself in such a "relationship." Sounds like a plot for a sci fi book to me. Back in the fifties or sixties there was a movie shown on TV in Los Angeles that covered the topic. They even had the robots evolved to the point of being able to reproduce biologically. It got so that no one knew who was human and who was an android. The big sin of the day was to go into "rapport" with an android (shack up with it) and everyone who was anyone was doing it (in secret).

One of the Letters in the same issue was from a woman who expresses a distaste for sex and defecation. Rather, she dislikes them appearing in print. It bothers me when someone tries to deny the existence of things which belong to the domain of nature and I should like to give her fair warning so that she won't accidentally read something that would offend her. My stories all contain people who perform natural functions, including sex. In fact, a good deal of sex.

In closing I would like to note that I looked up a word in the dictionary that was used in the letter

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mentioned above: scatology. I got a good laugh when I noticed the alternate meaning: obsession with obscenity. The writer should take a good look as I'm sure she was intending the more common meaning: obsession with excrement or excretory functions.

Sincerely,

Judith Allen
Beaverton, OR

Oddly enough, some people read to escape *from reality. They* want *heroes who never sweat and heroines who never have to blow their nose. Apparently, they can get sweating and nose-blowing right at home and it's no novelty to them. Sometimes a writer aims for this particular segment of the market. Remember, too, that technology in a science fiction story is intended to lend it greater* realism, *of another sort than that of human plumbing.*

—Isaac Asimov

Dear Dr. Asimov,

Your Viewpoint column "The Little Tin God of Characterization" in the May issue provided a needed analysis of just what is important in creating a successful SF story.

Gregory Benford's *Timescape* has been universally praised (evidently), but I was disappointed by it because Benford buried a fascinating idea about communication backward through time under mountains of characterization. The problem is the characters aren't very interesting. Benford is, without question, a very talented writer, but the characterization in *Timescape* seems to be on par with that found in any popular mainstream novel—competent but not memorable. Dostoyevsky he isn't.

On the other hand, Lucius Shepard's "How the Wind Spoke at Madaket" in your April issue is redeemed by the author's creation of the quirky, engaging character 'Sconset Sally. Without her, the story would read like the script of a schlock horror film.

I am introducing my children to your stories by reading them *I, Robot*, a collection of tales I remember fondly from my own childhood. In addition to the Three Laws, it is the characterization of the robots that insures that these stories will endure.

So, while I agree that the core of any good SF story is an intellectually stimulating idea, the most enjoyable stories offer truly intriguing characters in addition to these exciting ideas.

Sincerely,

Mike Carr
Toledo, OH

Yes, there is nothing like a good idea plus *good characterization. The question I raised was simply which was more important. If you couldn't have both, which should you shoot for. To give you an analogy, there is nothing like being both wealthy* and *in perfect health. If, however, you could only have one, which would it be? I would choose perfect health.*

—Isaac Asimov

Dear Dr. Asimov,

To your usually well-written article I have three observations:

(1) It is hard to comprehend that you have to instruct beginning

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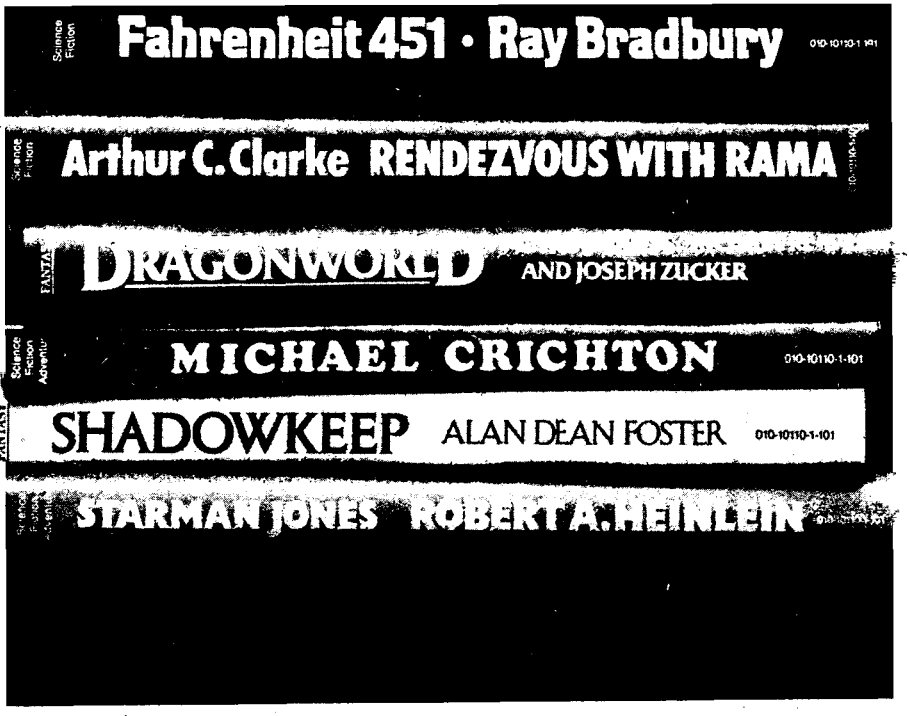

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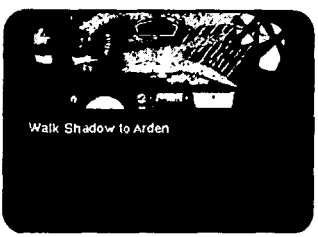

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writers in a concept so basic as that the idea is more important than characterization. In Dickens' work the characterization is directed toward the idea.

(2) Your characterizations are fine. What do your critics want —Siegfried or Brunhilde, or perhaps Roland or Don Quixote, or Tiny Tim, or Falstaff in your fiction?

(3) Your article serves two purposes: a) it discusses the matter of characterization; and b) it gives your readers even more information about you. (See page 35 where the latter begins with the plaintive words "And me? What about me?") This leads to the point that your best and most voluminous characterizations are of yourself. I have read some of your writing and, whether my concepts are accurate or not, I have more ideas about your character than any other professional writer.

Best wishes,

John D. Sens
Council Bluffs, IA

As a matter of fact, I have myself often thought that I have talked about myself more than any writer has since Mark Twain. Of course, Twain always revealed himself to be a decent and intelligent person, even when he was busily maligning himself. Heaven only knows what I reveal.

—Isaac Asimov

Dear Editors,

I hope Dr. Asimov is fully recovered from his operation and back to his usual self. I'm sure all his fans would join me in wishing him many more years of happiness and productivity. When you get hold of some of that immortality serum Tom Rainbow was talking about, be sure to give a liberal dose to the Good Doctor.

I would like to comment on two controversial subjects your magazine addresses: the possibility and effects of nuclear war and religion. I think they are totally suitable subject matter for SF, but like everything else, they should be handled plausibly and with discretion—such as in Ian Watson's "Cruising" and Fred Pohl's "Fermi and Frost."

Pamela Sargent's "Heavenly Flowers" is one of the best stories on the theme of a nuclear holocaust I have read. Carl Sagan's "Nuclear Winter" and H. Bruce Franklin's "Don't Worry, It's Only Science Fiction" were very informative. Let's hope that some idiot doesn't feed in one of those training tapes on purpose.

Michael Bishop's "The Gospel According to Gamaliel Crucis" is one of the best pieces I've read in *IAsfm*. Perhaps some people were offended by it, but I think they must have misread it. I got the impression that Bishop was presenting to us some of the paradoxes of human existence, particularly those of our modern age. Isn't that seeking for truth what real religion is, rather than blindly clinging onto empty rituals and beliefs? As far as I'm concerned, there are many "atheists," such as Jean-Paul Sartre, who are more "religious" than many Christians. And if people are offended by this, I suggest they consult John 8:32, II Corinthians 13:8 and II Timothy 2:11.

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Besides, some of SF's best masterpieces have been religious or had religious overtones: Miller's *A Canticle for Leibowitz* and the novels of Stapledon, Clarke, and C. S. Lewis. The Foundation novels gave me another perspective on the story contained in the Bible, not to mention the evolutionary record. I should someday read the Good Doctor's guides to the Old and New Testaments.

Sincerely,

Kent Martens
Ferndale, WA

I am naturally pleased with all your very positive remarks, but let me take this opportunity to assure anyone who may still wonder about it at odd moments that I am *fully recovered and am quite back to my usual self, if not more so. As many a young lady says during my many moments of suavity, "Oh, Dr. Asimov, you never change."*

—Isaac Asimov

Dear Dr. Asimov,

Your magazine has given me a great deal of pleasure over the last few years. Some of the stories have not held my interest, but there are always a few roses amongst the potatoes in every issue.

This letter, however, concerns the Viewpoint section. I am a physical science instructor at Arkansas State University. This section of your magazine has been of particular interest to me in my attempts to pound a little science into the heads of students majoring in PE, elementary education, business, etc.—most of whom have no interest in anything having to do with science.

When we cover the unit on weather, I include Carl Sagan's article, "The Nuclear Winter" (May, 1984). His discussion of the effects of a nuclear war on weather is a great addition to my lectures.

I use Stephen L. Gillett's "The

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Fermi Paradox" (Aug., 1984) and Robert A. Freitas, Jr.'s "Fermi's Paradox: A Rebuttal" (Sept., 1984) when covering astronomy. We have had several lively discussions based on these articles about the possible existence of other intelligent life in the universe.

I just wanted to thank you not only for the great science fiction but also for the many thought-provoking "Viewpoints."

Sincerely yours,

Jannie Huffman
Jonesboro, AR

I must admit that the magazine does not have, as its first purpose, the education of the American public. But when it happens to serve that purpose in addition to giving the public wholesome entertainment and to giving the staff an honest living, we are delighted.

—Isaac Asimov

Dear Shawna and Doctor Asimov,

I've just read the latest melee between your magazine and certain fledgling writers (February '85). First I'd like to congratulate you on your rational and reasonable replies. Now I'd like to offer a few ideas from *this* fledgling writer.

On what granite slab is it written that editors should feel responsible to critique manuscripts in detail? The primary responsibility of an editor is to accept or reject manuscripts. All else is gravy.

I can think of nothing more constructive to happen to a young writer than a quick and uncomplicated rejection. It can mean only one thing: Sorry, not good enough. A writer who takes to whining and bitching this early in the game has already failed. Those that press on have at least a 2 or 3 percent chance of success. If it were any other way, what force would exist to drive a writer to excellence? If it were easy to sell stories, it would not be worth pursuing.

The trouble with writing is that there are so many other poor souls out there doing it. The several rejections I have received from *IAsfm* has made me realize that because of the competition that exists in the short story market, the burden is on *us* to prove that we can write well and not on the editors to make it as easy as possible to get published.

Yours,

Daniel Pendick
Smithtown, NY

Thank you for being understanding. Still, I think the subject has been sufficiently argued back and forth. Let's get on to other things.

—Isaac Asimov

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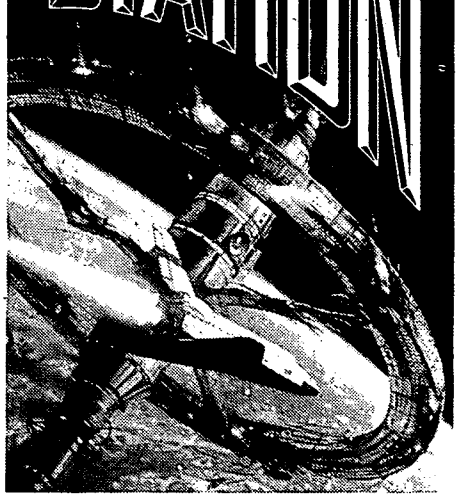

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GAMING

by Dana Lombardy

Robots were something of a craze last year. They still seem to be popular, with toys, model kits, comic books, television series and even Isaac Asimov's forthcoming novel from Doubleday, *Robots and Empire*, continuing to show up in the market place. If you look beyond the robot products aimed at young people, you'll find a few that a mature SF reader and the serious game player can enjoy. *Battledroids* by FASA Corporation, publisher of the *Star Trek Role Playing Game*, deserves a closer look ($15.00 at your local store, or direct from P.O. Box 6930, Chicago, IL 60680).

Two centuries of bitter warfare known as the Succession Wars have reduced the Human Sphere to a world of regressing technology. A few of the most massive war machines ever built—the battledroids — are still fighting. These huge, man-like instruments of destruction dominate the battlefields of the thirty-first century.

Whenever possible, defenders use their own battledroids against those of the enemy. On some planets, however, these robot warriors are expensive and human life is cheap, so infantrymen and conventional tanks must do their best to stop these metallic behemoths. Sometimes they succeed.

This is the background story within which the *Battledroids* game is played. One player sends his "droids" against those of his opponent, or you must fight with conventional armor and infantry against a battledroid.

The game includes two 17-by-22 inch maps with large, one-inch hexes superimposed over them to measure movement; a 32-page rule book; large cardboard playing pieces representing the battledroids, infantry, and armored vehicles; and two 6-sided dice. Also included are two 3-inch tall (1/144 scale) plastic, snap-together robot models.

The basic game's turn sequence consists of an Initiative Phase, a Movement Phase, and a Combat Phase. Players determine initiative with a dice roll. The loser moves his droids (or other units) first, then the winner moves his pieces. In the Combat Phase, the player that moved first declares each robot's target and his opponent then does the same.

By moving and declaring targets last, the player with initiative gets to react to his opponent's actions, which is a definite advantage. Finally, attacks are resolved, with both sides assumed to take damage simultaneously.

In the advanced and expert versions of the game, additional steps are added to the turn sequence, but play mechanics remain simple.

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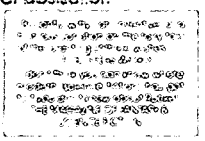

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Beginners may be intimidated by the size of the rule book, but its 32 pages are deceptive. The rules are well organized, clearly written, and the style of presentation is enhanced with numerous illustrations and examples of play. Movement patterns, line of sight determination for firing at targets, and combat resolution are briefly, but thoroughly explained.

Robots move directly into the hex to their front or rear by expending movement points to walk or run. Movement point allotments vary according to the type of droid. To move into one of the four hexes to either side of the droid, the robot must expend one or two movement points by turning to face that hex first. The exceptions to this are droids designed to jump. These special battledroids may move into any of the six hexes adjacent to the one they are in.

Combat in the basic game is simple and deadly. Each droid may shoot at one target per turn. You roll two 6-sided dice and if the number rolled is equal to or greater than a "To Hit" number (based on the weapon firing, modified for range, movement, and concealment), your droid has hit its target.

You then consult the Armor Penetration Table, cross indexing the firing droid's Damage Value with the target's Armor Value. This gives a new number that must be equalled or surpassed using a second dice roll in order to score damage on the target. For example, if a robot hit its target, and the penetration number required is a "7," but you roll a "6," the hit failed to penetrate the target's armor (no damage done).

If a hit succeeds in penetrating the target droid's armor, a third dice roll is made and cross indexed on the Damage Effects Table to give the extent of damage to the target. In the basic game, damage results include greatly reduced movement, temporary immobility, or total destruction. Over half of the possible damage results are "battledroid destroyed" in the basic game.

In the advanced game, players use a Battledroid Record Sheet to keep track of the location of damage to a droid's systems if it is hit and its armor is penetrated. Physical attacks, such as ramming or punching, and the effects of heat on the droids also come into play in the advanced game.

A Hit Location Chart determines what part of the droid's body was hit by a successful attack. Every time a specific location is hit, the owning player crosses off one Armor Value box on that droid's Record Sheet. When all of these boxes have been crossed off in one location, internal damage occurs and boxes are crossed off on the Internal Structure Diagram. When all internal boxes are crossed off, that part of the droid's body is then useless. Losing the head or center torso destroys the entire droid.

Battledroids is a game of action. Beginning with a simple movement/combat system, it builds to a realistic, tense game in which neither player can be considered defeated until his entire force of droids is immobilized or destroyed. Anyone who enjoys tactical science fiction games will enjoy playing *Battledroids.* ●

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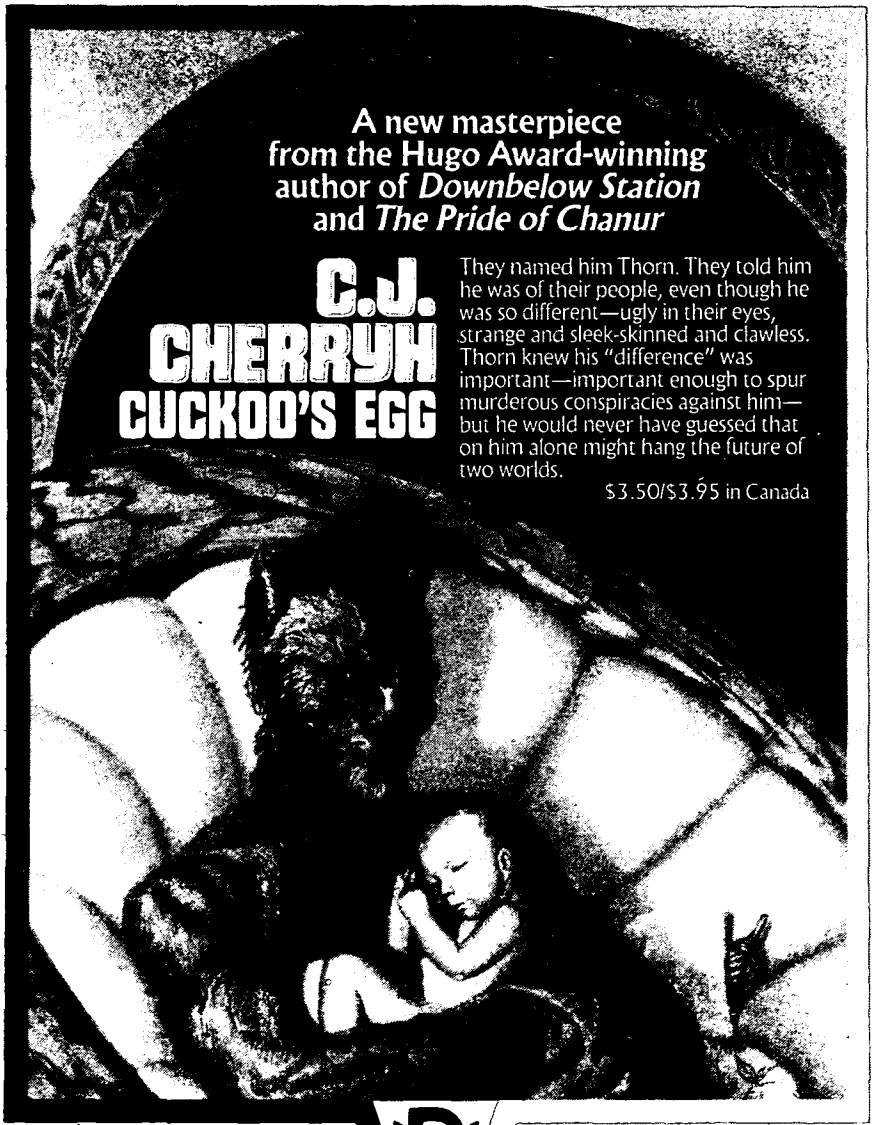

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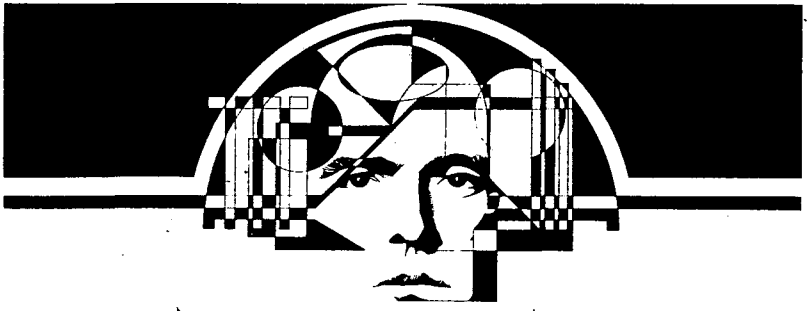

Considering the fact that thousands of predictions are made every year in SF stories around the globe it is not surprising that there are occasional hits of startling accuracy, like shooting a shotgun at a target. Of course there are even more whopping misses. Sometimes hits and misses accompany one another. Jules Verne scored a fantastic hit when he had the first spaceship shot around the moon from a spot in Florida near Cape Canaveral, but his ship was blasted off by a gigantic underground cannon. Hundreds of SF tales anticipated moon walks; not one guessed that the first walk would be observed on earth by television.

It would be no small task to draw up a complete list of H.G. Wells's hits and misses. His most spectacular success was in the chapter that opens *The World Set Free* (1914)—reprinted in my recent anthology *The Sacred Beetle and Other Great Essays in Science*—in which Wells tells how the atom was first split. The novel has the second world war starting in the forties, and there is a graphic description of an "atomic bomb" (yes, Wells used the term!) dropped on the enemy. But the bomb is dropped by hand through an opening in the bottom of a plane.

In his 1902 collection of prophetic essays, *Anticipations*, Wells correctly foresaw wide asphalt thruways, looping over and under at intersections, and with a dividing barrier between opposite directions of traffic. A chapter on twentieth-century warfare is amazingly accurate in many ways, but the air battles are fought by men in balloons, and Wells had this to say about submarines: "I must confess that my imagination, in spite even of spurring, refuses to see any sort of submarine doing any-

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thing but suffocate its crew and founder at sea." It has been justly said that Wells hit the mark more often in his SF than in his nonfiction. In *Social Forces in England and America*, published the same year as *The World Set Free*, he speaks of "the tapping of atomic energy, but I give two hundred years before that."

For decades I have been trying to gather a complete run of Hugo Gernsback's marvelous *Science and Invention*, especially during its golden age of the twenties. The magazine's lurid covers are an amusing mix of hits and misses. Among the hits: helicopters carrying girders for skyscraper construction, the use of flame throwers in warfare, and (my favorite) a man and woman embracing, with wires attached to various parts of their bodies to measure heart beat, respiration, perspiration, and so on. It illustrated Gernsback's article on the scientific study of sex. Among the misses: a giant robot policeman, and a picture of what a Martian would look like. Gernsback's *Ralph 124C41+* is probably the worst SF novel ever published (it ends with the awful pun "one to foresee for one"), yet it also contains some of the most accurate predictions ever made in such a novel.

If you're interested in outlandish misses about the future, I recommend *The Experts Speak: The Definitive Compendium of Authoritative Misinformation*, by Christopher Cerf and Victor Navasky. On hits by SF writers, see the article "Prediction" in *The Science Fiction Encyclopedia*, edited by Peter Nicholls. Listed below, from my collection, are some outstanding instances of astonishing anticipations by writers outside the SF field. See if you can guess some of the authors and the centuries in which they wrote. The answers are on page 115.

1. "Clothes hung up on a shore which waves break upon become moist, and then get dry if spread out in the sun. Yet it has not been seen in what way the moisture of water has sunk into them nor again in what way this has been dispelled by heat. The moisture therefore is dispersed into small particles which the eyes are quite unable to see."

2. "The primary elements of matter are, in my opinion, perfectly indivisible and nonextended points; they are so scattered in an immense vacuum that every two of them are separated from one another by a definite interval."

3. ". . . two lesser stars, or satellites, which revolved about Mars, where of the innermost is distant from the centre of the primary planet exactly three of the diameters, and the outermost five; the former revolves in the space of ten hours, and the latter in twenty-one and an half."

4. "If Mr. B will drink a great deal of water, the acrimony that corrodes his bowels will be diluted, if the cause be only acrimony; but I suspect

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dysenteries to be produced by animalculae which I know not how to kill."

5. "I know a way by which 'tis easy enough to hear one speak through a wall a yard thick. . . . I can assure the reader that I have by the help of distended wire propagated the sound to a very considerable distance in an instant, or with as seemingly quick a motion as that of light . . . and this not only in a straight line, or direct, but in one bended in many angles."

6. "Such changes in the superficial parts of the globe seemed to me unlikely to happen if the earth were solid to the centre. I therefore imagined that the internal parts might be a fluid more dense, and of greater specific gravity than any of the solids we are acquainted with; which therefore might swim in or upon that fluid. Thus the surface of the globe would be a shell, capable of being broken and disordered by the violent movements of the fluid on which it rested."

7. "Would it be too bold to imagine that, in the great length of time since the world began to exist, perhaps millions of ages before the commencement of the history of mankind—would it be too bold to imagine that all warm-blooded animals have arisen from one *living filament*, which the great First Cause endued with animality, with the power of acquiring new parts, attended with new propensities, directed by irritations, sensations, volitions, and associations, and thus possessing the faculty of continuing to improve by its own inherent activity and of delivering down these improvements by generation to its posterity, world without end?"

8. For I dipt into the future, far as human eye could see,
Saw the Vision of the world, and all the wonders that would be;
Saw the heavens fill with commerce, argosies of magic sails,
Pilots of the purple twilight, dropping down with costly bales;
Heard the heavens fill with shouting, and there rain'd a ghastly dew
From the nation's airy navies grappling in the central blue;
Far along the world-wide whisper of the south-wind rushing warm,
With the standards of the peoples plunging thro' the thunder-storm;
Till the war-drum throbb'd no longer, and the battle-flags were furl'd
In the Parliament of man, the Federation of the world.

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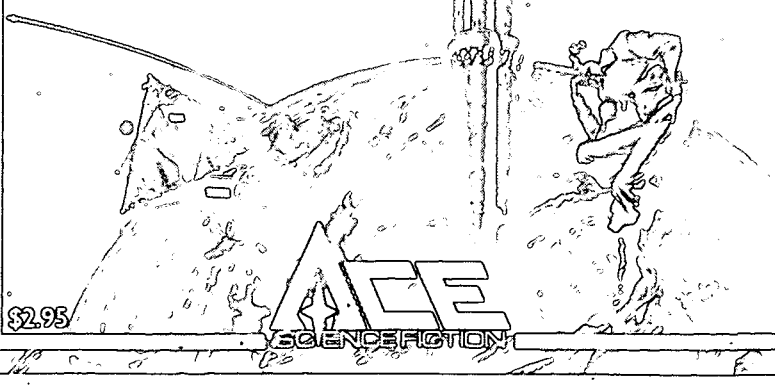

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VIEWPOINT

TOWARD ARTIFICIAL INTELLIGENCE

by Marvin Minsky

art: Arthur George

How long before we can expect to see robots that build space stations, assist brain surgeons . . . demand equal rights? We don't really know, but here Marvin Minsky gives us an exciting overview of how far the quest for Artificial Intelligence has come—and how far it still has to go. Dr. Minsky is Donner Professor of Science in the Department of Computer Science and Electrical Engineering at the Massachusetts Institute of Technology (MIT), the founder of MIT's Artificial Intelligence Laboratory, and a former president of the American Association for Artificial Intelligence.

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VIEWPOINT

This Viewpoint is about artificial intelligence, commonly called AI, which is an inquiry not just into computers and new kinds of machines but also into the nature of intelligence itself—a subject no one understands very well. Why not? Perhaps partly because no one's ever had a chance to look at any other kind of intelligence except our human kind! Why is this important? Because it is very hard to understand anything until you have other things to compare with it. For it is only when we examine many different examples that we can begin to sort out the important general principles from the myriad of interesting but often unimportant and accidental facts about individual instances. Thus, biologists have found out almost everything they know by making comparative studies of different kinds of animals, plants, bacteria, and viruses. Similarly, we have learned much about our own culture by studying the cultures of other nations, tribes, and communities, and we have learned a lot about our own language through comparing it to other peoples' languages and literatures. But we have never been able to study "comparative intelligence" very well—because there simply are no other animal species whose intelligence is really comparable to ours. True, we can study the way children think, which has taught us a lot about how our minds work; yet, the young human is too much like the adult. We can study chimpanzees, who are also much like us, and we can study elephants, dolphins, and dogs, whose minds are, to be sure, less like our own. But we cannot learn quite so much from them, and even less from the other animals, because they just don't have enough of what we regard as intelligence.

At last we are about to have a chance to meet some really alien minds! Our first encounters will not be in the forms of highly evolved intelligences from other planets (no one can predict when that will happen). It seems much more likely now that our first encounters with alien minds will be with ones that we ourselves have built—our very own AI machines. And, to judge by what their ancestors have been like so

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far, we can be confident that they'll be alien enough to give us ample food for comparative thought!

The only trouble is that we don't know how soon we're going to be able to meet them, because we don't know how to make machines intelligent! What, exactly, is the problem? In my experience, most people outside the field of AI think they already know what it is: It has something to do with the mysteries of Inspiration, Creativity, Intuition, Originality, and Emotion. "Machines," they say, "can do only what we, their human programmers, tell them to. So of course our machines can't really be intelligent: We simply do not know (and likely never will) how to tell them just what it is that our Shakespeares, Einsteins, and Beethovens do."

However, if there's one thing we have surely learned in research on artificial intelligence, it is that this is not the best way to describe the problem. Of course it will seem to be a mystery how a Beethoven writes a symphony—until one has a good idea of how to harmonize a simple tune. So I hope that this article can do two things. On one hand, it should help dispel the notion that it is hopeless to try to understand ourselves. On the other, it should encourage us to be less envious of our intellectual heroes by helping us to gain more respect for the ordinary things we all take for granted: In AI research, we are learning how amazingly complicated are the simple things we do in everyday life.

When we admire the outstanding performances of our greatest thinkers, athletes, and the like, the trouble is that we look right past the wonderful things we—all of us—do whenever we walk, talk, see, reason, and plan. It is not necessary to start AI research by trying to write computer programs that will paint great paintings or write brilliant plays. At this stage, we can learn more by trying to develop programs that can distinguish a dog from a cat by sight or carry on a simple, childish conversation.

When AI researchers first started to attempt to make computers duplicate human abilities, we encountered a curious paradox. It wasn't really

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VIEWPOINT

very long before we had computers doing things like playing games of chess, proving theorems that puzzled mathematicians, and designing circuits that were hard for engineers to figure out. These machines—really just regular computers with programs—were very impressive. Today, their descendants are often called "expert systems," and we are finding new and useful applications for them every day. The trouble with them is that they all are too narrowly specialized; they work only within the contexts or environments they are designed for. When you try to use them for anything else, they show few signs of having any ordinary common sense.

For example, in the early stages of designing a robot to build a tower of children's blocks, one program tried to build a tower by starting from the top—so every time it placed a block, the block would fall, and the machine had to start over again.

Why is it so hard to give machines common sense? To answer that, we must have some idea of what that is. Literally, common sense should mean "the things everybody knows." But most of that consists of things we take for granted, things so "natural and obvious" that it is hard for us to see what they are—even though they are involved in almost everything we do. For example, everybody knows that you can put a thing in your pocket—but only if it is not too large or too delicate, if it doesn't belong to someone else, or if it doesn't bite. Everybody knows that if you want to change a light bulb you can stand on a chair—but not if it's a rocking chair or a flimsy antique, or if it is a thousand miles away. Thus, one feature of commonsense knowledge is that, although at first it seems to be composed of rules, each rule has so many exceptions that it is of little use to know only the general rules.

What, then, is the difference between how those computer expert systems work and how human common sense proceeds? As I see it, this is a matter of the range and varieties of knowledge they use. The expert system manages to work by using only a few varieties of highly specialized

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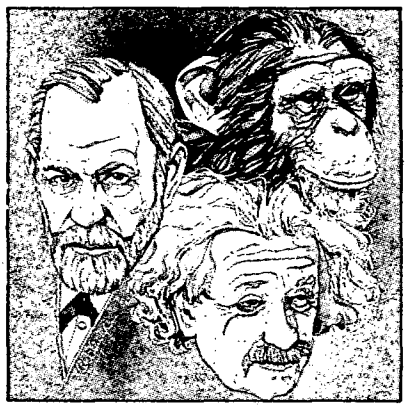
VIEWPOINT



"At last we are about to have a chance to meet some really alien minds! Our first encounters will not be in the forms of highly evolved intelligences from other planets (no one can predict when that will happen). It seems much more likely now that our first encounters with alien minds will be with ones that we ourselves have built—our very own AI machines."

knowledge about its subject matter. Within each of those knowledge categories, the program may "know" thousands of items, but they are all essentially of the same type. However, the knowledge that a sensible person must have to get around the ordinary world is not anything like that: One has to know thousands of *different kinds of things*. So, there is much more complexity in how things are represented in our minds than in the computer programs. And this causes a serious problem because working along the lines of our current theories of artificial intelligence, it's difficult to discover good ways of representing each kind of knowledge. The problem *can* be relatively simple—even when there are huge amounts of data—so long as we can use uniform ways to represent all of it. Computer programmers sometimes call these "data structures." The trouble is, for common sense, we need many different kinds of such structures, and no one yet knows any systematic ways to link them together smoothly. And, without such links, machines can't do

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ordinary, sensible reasoning. It's simply not enough to program them with many separate facts: We also need good ways to decide which facts to bring together, and good ways to combine them.

How large are our human knowledge networks? No one really knows, but I'd guess that it would take more than a million linked-up bits of knowledge, but less than a billion of them, to match the mind of any sage. (A billion seconds stretches thirty years, and psychology has never found a way to make a person learn something new each second for any prolonged period.) In any case, understanding how to make machines that can build such networks inside themselves seems to me the most exciting research problem of our time. I believe that such problems are difficult and complicated, but not impossible to solve.

It would be a mistake to try to study commonsense reasoning without also studying the learning process. One reason for this is practical: Even after we understand how to do it, it will still be an enormous job to program into a machine all the knowledge a reasonable person must have. To make our way around the ordinary world, we each know how to recognize and use ten thousand different kinds of things. Similarly, to make our way through everyday conversations, we know several meanings for each of a comparable number of words. To try to program that would be an awful job. In the end, it would be easier, and better, to program our machines to acquire such knowledge themselves; by watching what happens, by having conversations with knowledgeable people, by asking questions and making experiments, reading books, and doing all the other things that people do to educate themselves. Of course, it takes us humans time to learn. A person can become a good chess player or a mathematician in just a few years, but it takes even longer for an infant to become a competent adolescent. Still, once we discover an adequate set of principles for this process, there is no reason that intelligent computers could not learn much faster than we do.

There is another reason that machines must have the ability to learn in order to be truly

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intelligent. It is that knowledge is not a static thing. Whenever we solve any hard problem, some learning is involved—at least on a short time scale. True, we usually think of knowledge and memory as ways of storing thoughts away for *future* use. But in the course of solving any complicated problem, we also need ways to keep track of what has happened *recently*, so that we can change our strategies to get around the obstacles we have found. This requires the mind to keep records of what it has been doing; without such records, we'd keep going back to the beginning of each task and doing the same unsuccessful things over and over again. Furthermore, though we usually think of learning and memory as relatively passive, in the sense that they simply record what happens, consider what must happen after you solve a hard problem. In order to learn from such an experience, some part of your mind must have ways of deciding what to remember; it must know how to make guesses and form judgments about which features of the present situation are likely to apply again at later times.

How does human learning work? It would be wonderful if we could look to psychology and brain science for the answer. But really, these sciences still know very little about the mechanisms of learning and memory. As I mentioned, our very best methods are those that make use of comparative studies—the way the great Swiss psychologist Jean Piaget did in his research on how children think. As his research showed, children have different ways of thinking at various stages of development, and we can learn a lot, by comparing these different stages, about how we develop common sense. For example, certain skills seem never to appear by themselves, before certain others; this can lead us to suppose that later skills depend on the earlier ones in specific ways. Without such studies, by looking only at adults, we'd never see these internal dependencies. Piaget made many observations about the nature of the different kinds of thinking; some of these had never been noticed before, while others had always been taken for granted and assumed to be present from birth, rather than being

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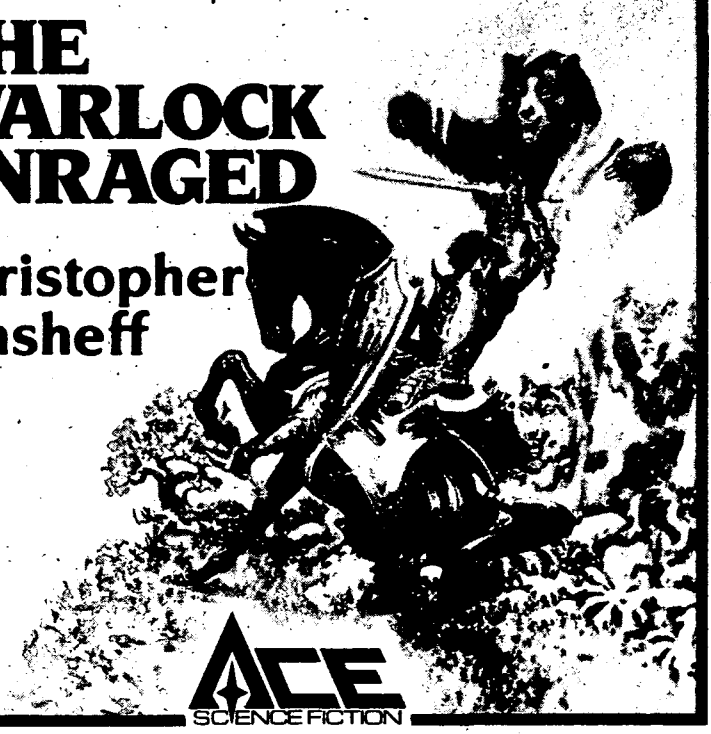
THE WARLOCK ENRAGED

by Christopher Stasheff



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developed throughout infancy and childhood. So those of us working in this field of machine learning should learn what psychology has to tell us, but I believe it has mostly been a one-way street going the other way. Scientists working on artificial intelligence are learning—even more rapidly than psychologists—about how knowledge is represented in intelligent systems, computers and brains.

Still, there is much to learn from biology, especially from the biology of the brain—for example, about how knowledge is stored in our brains. Are memory blanks like freezer compartments in which time stands still, or do their contents slowly interact? How long do memories remain? Do some grow old and die? Do they get weak and fade away, or do they just get lost, never to be found again? We already know a good deal about this; for example, it appears that memories seldom become permanent unless their precursors are allowed to persist for about an hour or so. However, no one yet knows much about the nature of the machinery or processes that convert short-term memories to long-term ones. But we do know quite a lot about the speed of such processes. We know that the rate at which memories become fixed does not appear to vary very much among different people. Despite all those legends about prodigies, no good experiment has ever shown that any person can remember new facts—of any sort whatever—at rates faster than about one per second continuously for more than a few minutes at a time. Nevertheless, today there is no generally accepted theory of how memories are stored inside our brains.

What do we mean by "intelligence"? It never pays to try to make narrow definitions for things we don't yet understand very well, so let's just say we mean the ability to solve problems that people would say require intelligence. Still, one can ask, if intelligence is a single thing, could there be many clever ways for brains—or machines—to think? Of course, no one yet knows the answer to that, but it certainly would be surprising if there were only one single way. There are certainly many different ways to fly: Nature used mainly flapping wings, but

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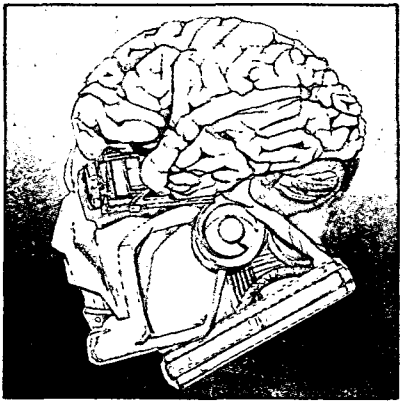
"Is there any reason to think that the first way evolution found to make intelligent machines—the human way—is a particularly efficient one? Well, yes . . . and no. Yes, because evolution generally tends to try the simpler combinations first. And no, because much of evolution is a matter of chance, it doesn't *always* try the simplest or best combination first."



humans have found other means as well—lighter-than-air balloons, propellers, and rockets, for example. Similarly, it could turn out that there are different ways for machines to solve problems. Indeed, some researchers in artificial intelligence hope to adopt some methods from logic and mathematics, in which everything else can be deduced from only a few basic principles. These theories look toward very neat, logical ways to make thinking machines.

Others in the field do not believe this can work. They argue that no such systems of logic can be found. Instead, they say that in order to make machines that can get good ideas, we'll have to give them the ability to use vague, approximate analogies. Such machines would not be designed around a very few, always applicable principles; instead, they would be engineered to accumulate large, and eventually huge, connections of observations and experiences. These analogy machines would then make themselves better and better able to guess which situations that have been

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encountered in the past are most similar to a new one and thus to deal with it effectively.

But, how could such a machine make decisions about which things are "similar"? As soon as one begins to think about this way of building intelligence—by using "thinking by analogy"—one sees that this is quite a problem in itself. Perhaps this is why so many researchers in AI have been entranced with the problem of making machines "see." For how we think depends very much on what we learn to see as similar.

Which colors do we think look most alike? Which forms and shapes, which smells and tastes, which timbres and pitches, which pains and aches, which feelings and sensations are similar? Such judgments have a huge effect at every stage of mental growth—since *what we learn depends on how we classify*. A child who classified fire only by the color of the flames might come to be afraid of everything colored orange. Then we'd complain the child had "generalized" too much. But if he classified each flame by tiny features never twice the same, that child would get too often burned and we'd complain he hadn't generalized enough. This problem of similarity is so important that, as the reader will discover, questions about visual recognition and classification have turned into a whole field of research. In everyday life, we take for granted the ability to recognize things and never realize how complicated seeing really is.

Isn't vision just a peripheral accessory? After all, blind people can be just as smart as sighted ones! Nevertheless, there are good reasons to focus on vision in artificial intelligence. The obvious one is that, as far as robots are concerned, vision will be extremely useful. This isn't just because the better a robot can see, the easier it will be for it to do things. Vision will also be useful because it will enable us to show—that is, to teach—our robots what to do. This is important; everyone who has had anything to do with computers knows how hard it is to "tell" them things. How much easier this will be, in the future, once we can demonstrate by example. (When one comes to think of it,

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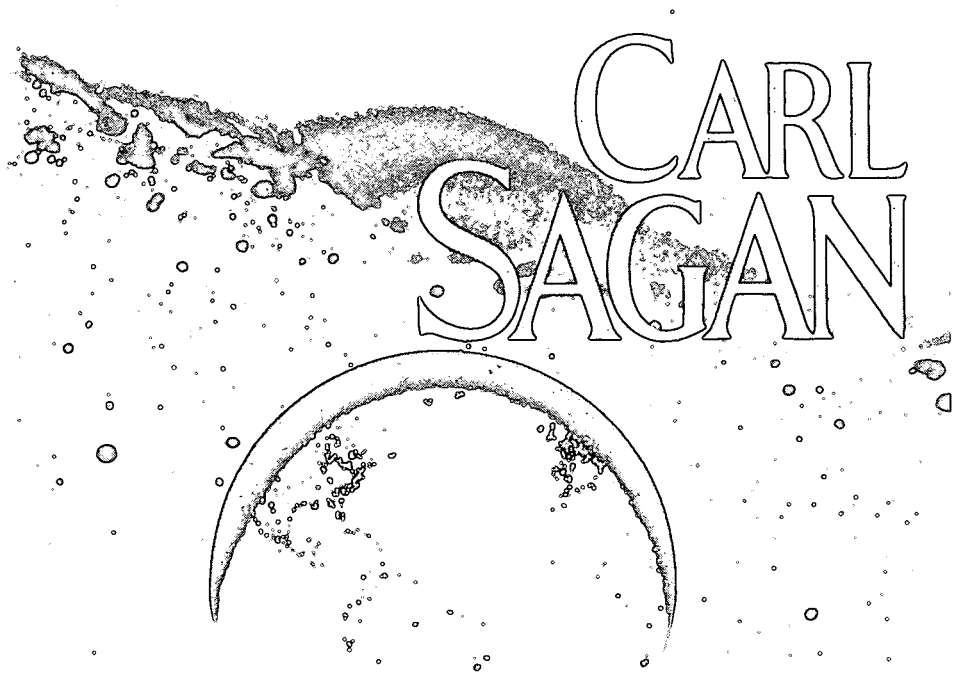

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the same is true with ourselves.)

But practical aspects aside, vision research has actually turned out to be important in more basic research on theories of intelligence. Indeed, perhaps our general ability to think so well has evolved from our ancestors' ability to see so well.

This raises the possibility of yet another approach to how to make intelligent machines: to copy human psychology. This is the approach I prefer; the only trouble is, as I mentioned, we still don't know enough about psychology. Nevertheless, since we're the only creature around that does the kinds of intelligent things we want our computers to do, we may as well use ourselves as examples.

Is there any reason to think that the first way evolution found to make intelligent machines—the human way—is a particularly efficient one? Well, yes . . . and no. Yes, because evolution generally tends to try the simpler combinations first. And no, because much of evolution is a matter of chance, it doesn't *always* try the simplest or best combinations first. Furthermore, when evolution finds a combination that works, it tends to stick with it, because whenever a species tries a larger change, things almost always get worse before they get better. This means it is nearly impossible for an evolving species to make any really basic changes in its older structures; the competition to survive is usually too fierce to leave enough of the temporarily less-efficient survivors to ensure that the change will be passed on. This probably means, at least on this particular planet, that there is essentially no chance that other animal species will evolve any very different or more advanced forms of intelligence in the course of natural evolution. The only likely way that could happen would be as a result of our own careful supervision, either in the form of controlled genetic modifications or, more likely, as planned designs for intelligence in machines.

One thing few outsiders are told is just how long it takes to solve these kinds of problems. The new sciences of robotics and artificial intelligence are very young, barely twenty-five years old. A mere handful of people were working on these profound

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problems in 1960. Today there are perhaps a few hundred, but that is still very few compared to fields like physics or molecular biology, which have literally tens of thousands of research workers. And, as in every other field of research, most of these people are working on relatively immediate, practical aspects. Only a small fraction of them work on the hardest, most fundamental, long-range problems. Accordingly, this means that in the new science of artificial intelligence only a hundred or so people are involved in what one would call genuinely basic research. This has produced an interesting situation. There are many hundreds of important theoretical problems, but far fewer scientists working on them. Therefore, at any given moment of time, there are many important problems that no one is working on.

Why are there so few individuals doing basic research? It's not entirely a matter of having the imagination to do that sort of work. It also requires a certain special kind of temperament. Few people have the disposition to take on problems they aren't sure can ever be solved—there's so little certainty of any payoff or reward. You have to have a certain arrogance and independence to try—perhaps for years—to do something entirely new. In that sense, the most ambitious scientists are often a lot like gamblers.

Another little-known fact is that it is not always the well-known scientists who do the most important work. Sometimes, of course, they do, but at other times the senior person's name appears as if by magic on the final publication, which is all the public will ever see. However, in embryonic fields like robotics, where ideas come and grow and fade away so rapidly, much of the most important work is done by relatively young students. I would say that more than half of the basic discoveries in AI have been made by students before they completed their Ph.D. theses. Afterward, quite a few of those brilliant young people abandon research and instead work on practical applications. Despite all the promise of and publicity about this field, there are few opportunities after one leaves the university to continue

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in basic research. On the whole, industry is well intentioned about the future of robotics, but it simply doesn't understand the problems.

Here is a typical scenario of the time scale of basic research in artificial intelligence, one based on my own experience. In the late 1950s, I had a certain idea about how computers could be used to describe things. It took me two or three years to clarify this idea, and it was published in 1961. (I was lucky—as it happened, one of the professional journals was rushing out a special issue about computers. Normally, it would have taken me four or five years to get published.) In the meantime, I became a professor and started to try to convince my students to work on such ideas. In 1964, one of my students, Thomas Evans, finished a beautiful piece of research, which was partly based on my work but included many more ideas that were entirely his. What Evans did was to show how my description idea could be used to make a machine discover certain kinds of analogies between different things. Thus seven years had passed between a first conception and a demonstration (by someone else) of how it could be used. Why did it take so long? Because it needed a new way of thinking.

What happened next? Nothing much. I explained to every new student the importance of what Evans had done, but each of those brilliant people had one or another different way of thinking. Some couldn't see how to use what had already been done. Others did not see that it was especially important. Each of them became attached to some other good ideas and did outstanding work on them. After all, what else could one expect: There were perhaps a hundred good ideas around, but only a couple of dozen researchers! Today there are probably a thousand good ideas around, and still the number of good researchers is less than that.

In any case, a few years later, another student clearly saw the next step to take in this area, and in 1970, after several years of work, the head of the AI lab at MIT, Patrick Winston, finished a wonderful thesis; in it he showed how to combine the earlier ideas—and many important new

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ones, too—to make a machine that could *learn to find analogies*, at least to a limited extent. I found this tremendously exciting, because it was clear to Winston and to me that this could unlock many other mysteries as well. Then, for the next few years, both of us taught this theory to all the new students. And again the same thing happened; for a long time no one was entranced by this particular set of ideas. Why not? For one thing, there were several other equally wonderful ideas competing with them, and some of them appeared to be both easier to solve and more profitable. For another, Winston and I were engaged with other matters. Finally, even when a new person decides to take on such a project, it takes two or three years to gain the experience to handle it, another two or three to carry out the project, and then yet another year or two to understand what was done clearly enough to write it down. Only then can it be explained precisely, in a way that will stimulate someone to start the cycle over again. Most people simply cannot tolerate that pace: It seems too slow. Yet on the scale of history, it's very, very fast indeed. From Newton to Einstein was only two and a half centuries. The great developments of modern physical science all took place in less time than it took to build a single great cathedral in the Middle Ages.

It is funny how impatient people get. For example, about twenty years ago one of AI's great pioneers, Herbert Simon of Carnegie-Mellon University, predicted that in another ten years computers might play chess so well that some machine could be world champion. When the decade ended, some angry critics shouted that he had been wrong and that no machine would ever be that good at chess—indeed at the end of that first decade, the best chess machines could scarcely yet play decent, honest, amateurish chess. Even at the end of the second decade, those critics still complained, for now the best chess machine could merely play at near master level and could beat only about 999 out of 1,000 good chess players. What a disappointment! Now it is perhaps time for a new prediction: It may be still another

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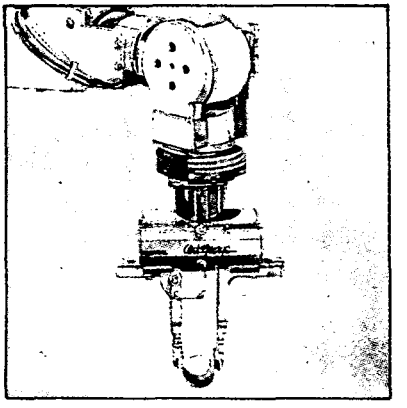
decade before a chess machine gains the status of international grandmaster, and two decades to the world championship. It seems to me the principle is the same, in any case.

But it might be more illuminating to ask why Simon's prediction came out wrong. I think the answer is just so simple that it was overlooked: The error was not technical, but economic. As it happened, only three or four people actually pursued research on chess strategies during that period, and there was no inducement to get others to join them because there was no obvious profit in it. And because there's no way to prove me wrong, I'll add this little bet: If Simon himself had spent ten years on it, I'm sure his prediction would have been right on the nose.

Now let's consider the time factor in relation to a hard problem that I've already mentioned and that some of us have been working on for the past twenty-five years: how to make computers have common sense. In the near future I will publish what I've learned about this, in a book called *The Society*



"If we miniaturize mechanical hands, then microsurgery would be much easier, and surgeons could repair more tiny tendons, ducts, and other structures now beyond our clumsy reach—especially the inaccessible areas of the brain. And as for industries that are inherently hazardous, at some time in the future, if a tunnel or mine should collapse, we can say unfeelingly, 'Too bad. We've lost a dozen robots.' "

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of Mind. I believe it will contain some good ideas, but even if that's true, it will take another quarter of a century to separate the good ones from the bad ones. If it takes a quarter-century to test an idea—or to find out that it wasn't so good after all—then how long may it take to make machines truly intelligent? If we need just twenty such ideas and each one has to be developed on the basis of the last, then the process could take 500 years. And though so far as history's concerned, that's very little time, it may seem too long for mortal people to be bothered with. But what if some of those ideas are independent of one another—so that they could be studied, each one by a different research group, all at the same time? If that turns out to be the case, then we may already be very close to making highly intelligent machines. The future no one knows. It could be a long way off—or it could be just around the corner!

It is also not out of place to note that the artificial intelligence community has been responsible for a surprising proportion of the advances in computer science. Not only did the time-sharing concept come from them, but so did many of the advances in word processing and office automation, the new LISP machines that are used in advanced development centers today, many of the computer-aided design and graphic systems now becoming popular—and soon a great new wave of multi-parallel and so-called fifth-generation designs. (True, no one knows what the first four generations were, exactly, but who cares? It has a nice sound.)

Today we in AI could use more support, but I see no real reason to complain that industry does not contribute enough to basic research. Often when a company decides to make such a move, it may be too far ahead of time. When the AMF corporation first produced commercial assembly-line robots, it was unable to market them successfully, because few industrial production managers could figure out how to use them. In my view, commercial robots have not really come very far. There still are no industrial robots that can begin to approach the sensitive, refined motions that every person's hands

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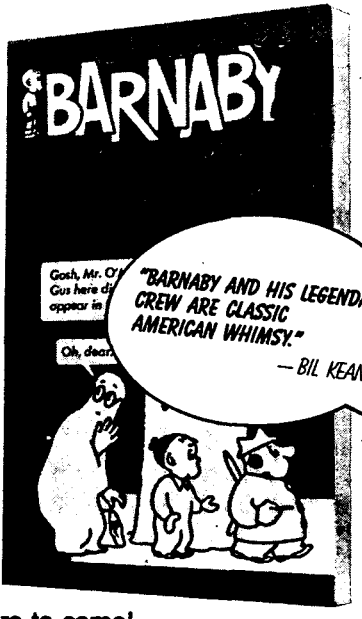

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make in such mundane tasks as tying a shoelace. Basic research on gaining more dexterity is proceeding only very slowly, here and there, because such serious projects are so very few.

One of the problems with seeking support for basic research is that it is hard to predict just who will be the beneficiaries of any particular area of research. I want to explore two examples of fields still in their early infancy. First, suppose that we could develop a really powerful vision system—that is, a machine that could really "see" in the sense that people see. By this, I mean the ability to look around a room and recognize the presence of and relations among all the ordinary objects there: to be able to say, "There's a desk, with books and papers and envelopes and paperclips; there's a person sitting in a chair; that's a window and a real tree—and *that's* a picture of a tree on the wall." If we had such a machine, what could we use it for? That's simply an impossible question! One would do better to ask, "What could we *not* use it for?" One can scarcely think of any place where such machines could not be used.

A second field that will surely change the world is the one I call telepresence. At some point in the future someone would go to work by slipping on a comfortable jacket lined with a myriad of sensors and musclelike motors. Each motion of his arm and fingers would then be reproduced at another place by mobile, mechanical hands. Light, dexterous, and strong, those remote mechanical hands have their own sensors, which will transmit what's happening back to the worker so that he will seem to feel whatever the remote hands may touch. The same will be done for the motions of the head and eyes, so that the operator will seem to see and sense what's happening in the other workplace. Once we can do such things, it will be another simple step to give those remote presences different strengths and scale of size. These remote bodies can have the brute capacity of a giant or the delicacy of a surgeon. And, using these information channels, an operator could be anyplace—in another room, another city, another country, even out on a space station orbiting the Earth.

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What will telepresence do? Among its task would be included:

Safe and efficient nuclear-power generation, waste disposal, and engineering, even under the sea. We all saw the absurd inflexibility of today's remote-control systems in the Three Mile Island breakdown. Surely telepresence could have averted much of the danger, the damage, and the expense of repairing the injured reactor.

Advances in fabrication, assembly, inspection, and maintenance. With telepresences one can as easily work from a thousand miles away as by being right there. We could invent new kinds of "work clubs" in which several people could combine their part-time energies.

Elimination of most chemical and physical health hazards, as well as the creation of new medical and surgical techniques. If we miniaturize mechanical hands, then microsurgery would be much easier, and surgeons could repair more tiny tendons, ducts, and other structures now beyond our clumsy reach—especially the inaccessible areas of the brain. And as for industries that are inherently hazardous, at some time in the future, if a tunnel or mine should collapse, we can say unfeelingly, "Too bad. We've lost a dozen robots."

Construction and operation of low-cost space stations. The United States is now committed to build a permanent space station in the early 1990s. How much more useful and effective it would be if we could design it from the start to exploit telepresence technology.

Naturally it will be a while before we see such robotic feats. Today our robots and our primitive AIs are still much more like wind-up toys than like our own great human minds. However, we're seeing signs of things that real robots ought to be able to do, like sensing the sounds of certain words and acting on those phrases in accord with real—although limited—knowledge of what they signify.

As progress continues, we'll reap the fruits of our research and start to see machines that display more genuine signs of having minds. We'll start to give them learning skills to organize

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VIEWPOINT

their little minds, so that they can learn from us, and from each other, as we do. We'll show them how to make copies of themselves. Most of them won't even have to learn such things, because they will be manufactured already knowing them. We'll give them limbs even more dexterous than our own and new kinds of senses that will seem to us uncannily observant. Gradually, they'll begin to slip across that edgeless line of doing only what we programmed them to do and begin to move themselves into the zone of things that *we* are programmed to do. Then, of course, mere telepresence will be seen as having been only a passing stage, until the brainy AI machines became smart enough to do the jobs themselves.

What will happen when we have to face those options in which intelligent machines begin to do the things we ourselves *like* to do? Economists and sociologists are helpless in the face of such questions, because their sciences assume that the entities they're dealing with—that is, people—will remain essentially the same. The only thinkers in our society who, in my view, have really tried to discuss such drastic technological changes are the writers of science fiction. Unless we decide to ban AI, to try to keep the world the way it is today, we will all someday have to face those issues that so far only science-fiction writers have raised. What kinds of minds and personalities should we dispense to our machines? What kinds of rights and privileges shall we give them or withhold from them, and what roles shall we allow them in the societies which, up to now, we alone have ruled?

This article is for those who have the courage and disposition to consider such questions. For the most part it will not answer the questions but only make them seem harder than before. But that's the way the problems we have to face ourselves should be—now that we are on the verge of leaving all the easy questions to our machines. ●

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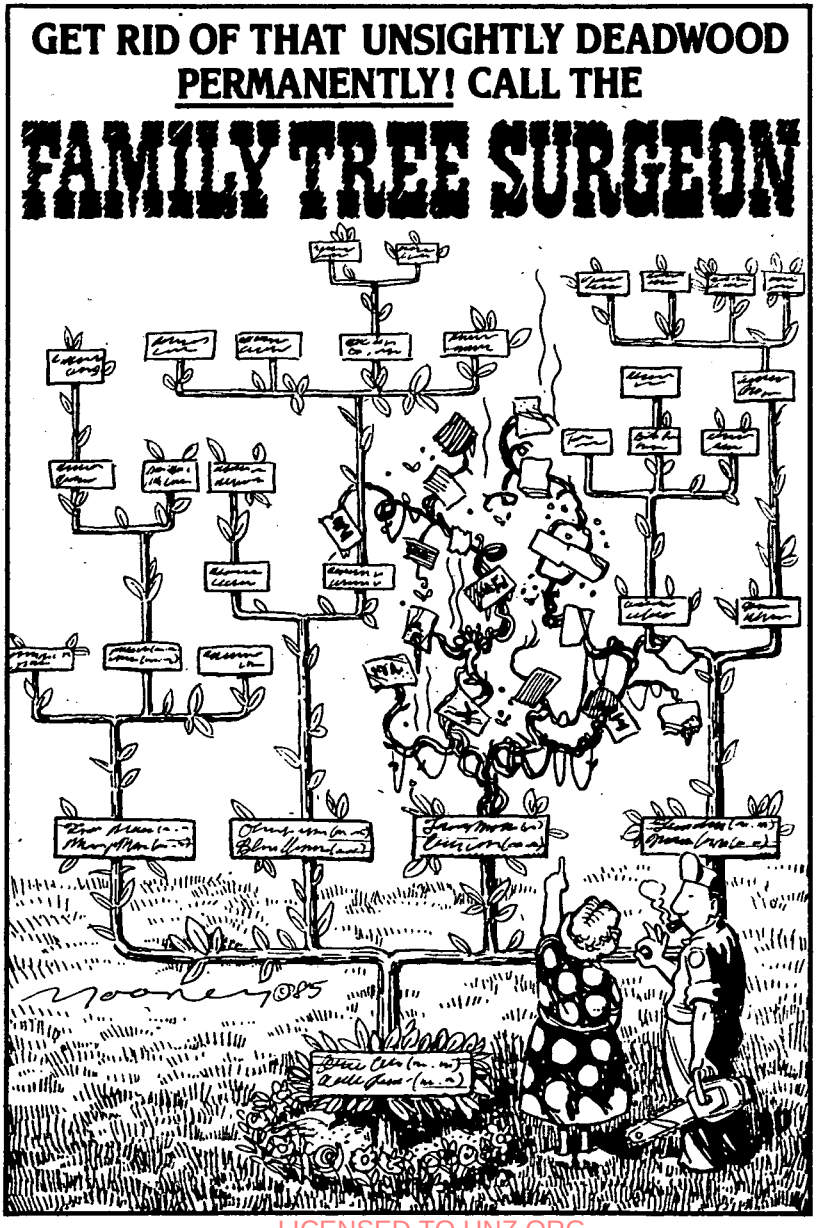

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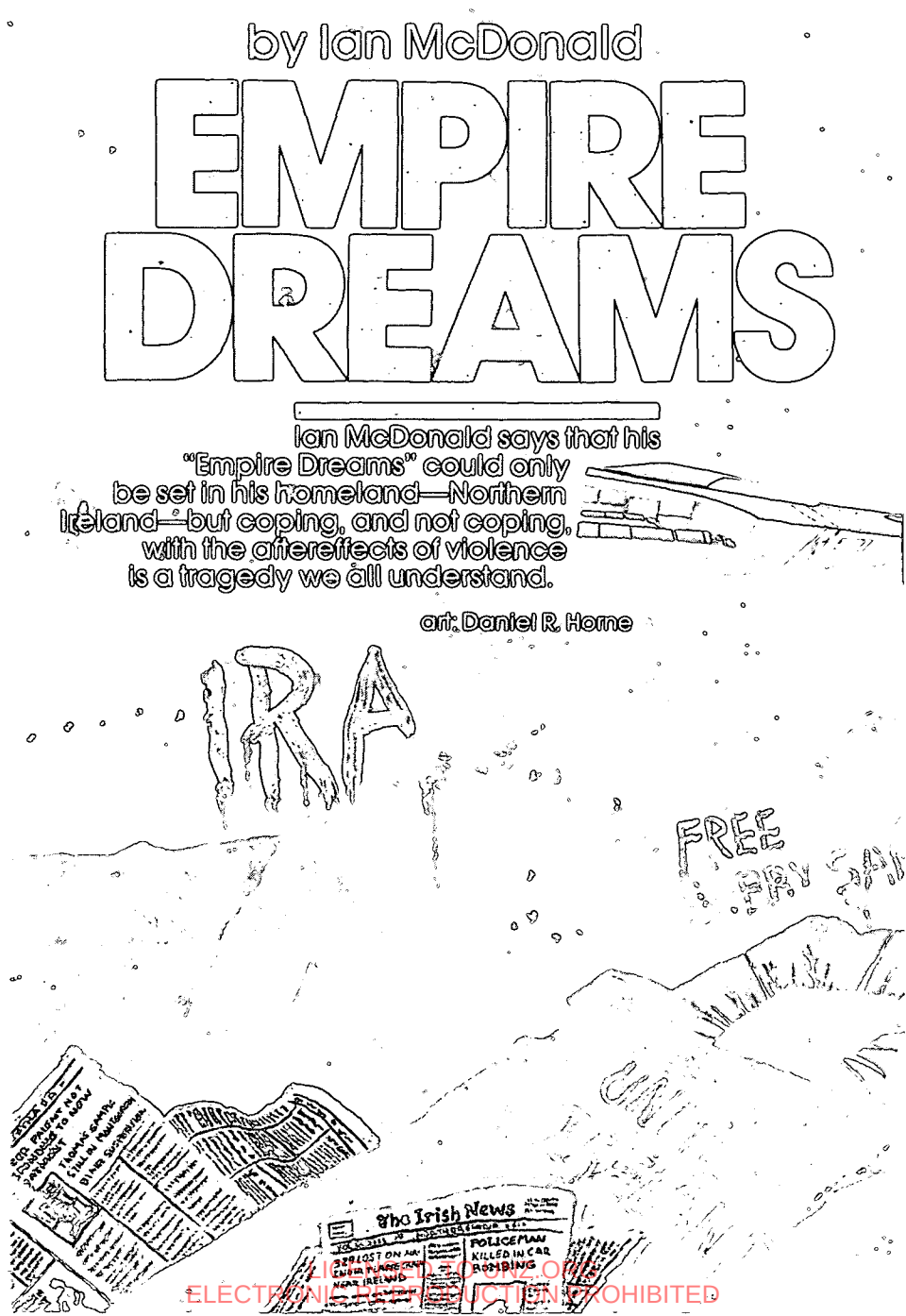
by Ian McDonald

EMPIRE DREAMS

Ian McDonald says that his "Empire Dreams" could only be set in his homeland—Northern Ireland—but coping, and not coping, with the aftereffects of violence is a tragedy we all understand.

art: Daniel R. Horne



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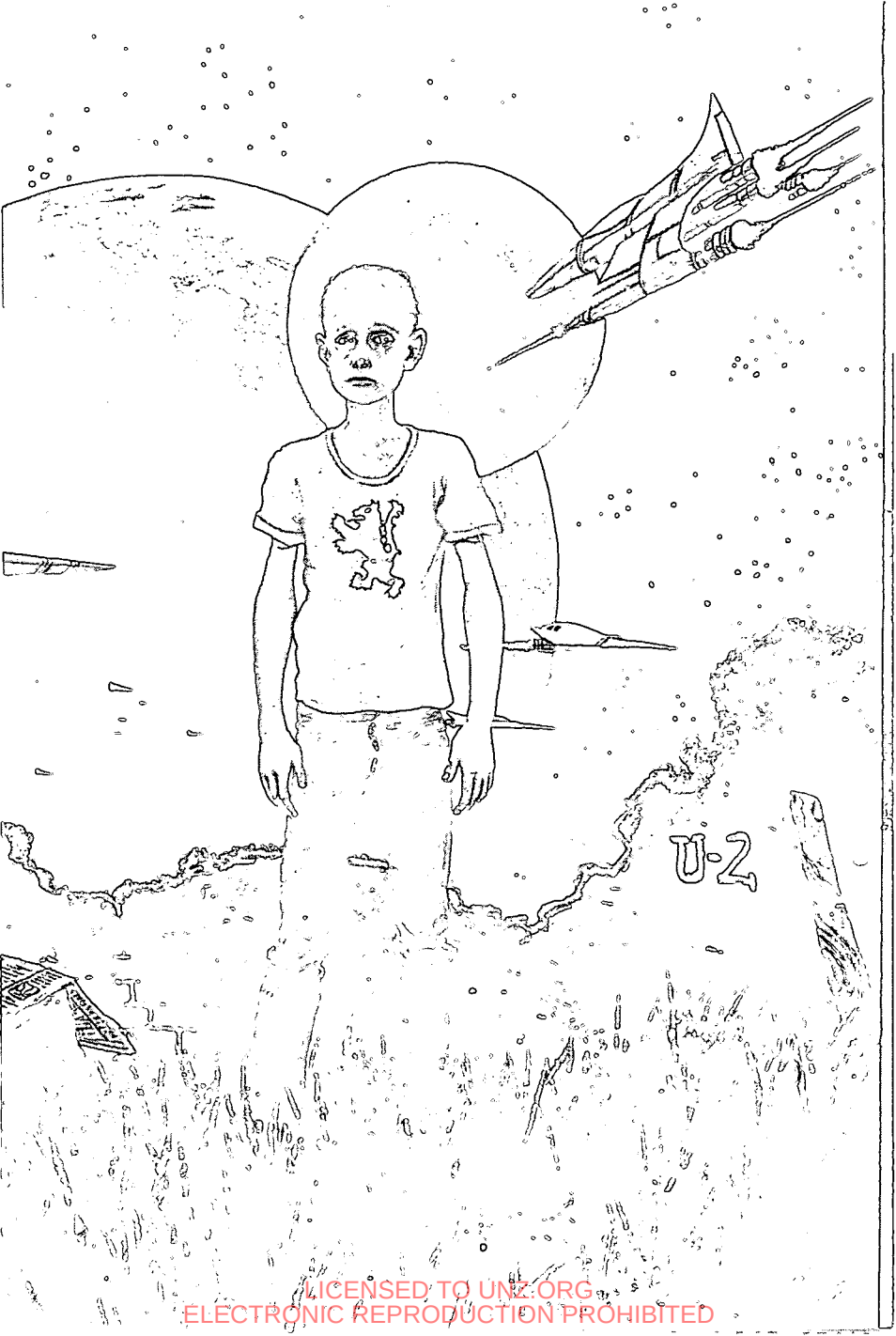

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She can smell the sickness everywhere. Her nostrils are not duped by the desperate odor of antiseptic; there is a peculiar stench to sickness that nothing will conceal, a stench mixed in with the thick glossy utility paint which, through the years of overpainting, overpainting, has built up into layer upon layer of ingrained despair. From these hopeless strata sickness leaks into the air. There is no concealing the smell of a hospital, it squeezes out of the floortiles every time a trolley rolls over them and under the slight pressure of a nurse's single footstep.

As she sits in the chair by the bed she breathes in the sickness and is surprised to find how cold it is. It is not the cold of the snow falling outside the window, the snow that softens and conceals the outlines of the Royal Victoria Hospital like white antiseptic. It is the cold which encircles death, the cold of the boy on the bed, which draws the living heat out of her; cold and sickness.

She does not know what the machines are for. The doctors have explained, more than once, but there must be more to her son's life than the white lines on the oscilloscopes. A person's life is not measured by lines, for if that is all a life is, which are the lines for love and the lines for devotion, which is the pulsebeat of happiness or the steady drone of pain? She does not want to see those lines. Catherine Semple is a God-fearing woman who has heard the steady drone of pain more than anyone should have to in any lifetime, but she will not hear it whisper any blasphemous rumors. Joy and pain she accepts from the fingers of the same God, she may question but she never backbites. Her son lies in a coma, head shaved, wires trickling current into his brain, tubes down his nose, throat, arms, thighs. He has not moved for sixteen hours, no sign of life save the white measurements of the machines. But Catherine Semple will sit by that bed until she sees. At about midnight a nurse will bring coffee and some new used women's magazines; Nurse Hannon, the kindly, scared one from County Monaghan. By that time anything might have happened.

"Major Tom, Major Tom," booms out the huge voice of Captain Zarkon, "Major Tom to fighter bay, Major Tom to fighter bay. Zygon battlefleet on long-range sensors, repeat, Zygon battlefleet on long-range sensors. Go get 'em, Tom, you're the Empire's last hope." And down in the hangar bay under dome under dome under dome (the high curved roof of the bay, the plasmoglass blister of the ship, the decaled bubble of your helmet) you scrunch down in the rear astrogator's seat of the X15 Astrofighter and mouth the fabulous words, "You're the Empire's last hope." Ofcourse, you are not the Major Tom whose name thunders round the immense fighter bay, you are Thomas Junior, The Kid, less than fifty percent of the Galaxy's most famed (and feared, all the way from Centralis to Al-

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phazar 3) fighting duo, but it is nice to sit there and close your eyes and think they are talking about you.

Here he comes, Major Tom; the last Great Starfighter, Space Ace, Astroblaster, Valiant Defender, thrice decorated by the Emperor Geoffrey himself with the Galaxian Medal and Bar, striding across the hangar deck magnificent in tight-fitting iridescent combat-suit, and, cradled beneath his arm, the helmet with the famous Flash of Lightning logo and the name "Major Tom" stenciled in bold black letters. The canopy rises to admit him and the hero snakily wiggles into the forward command-seat.

"Hi, Wee Tom."

"Hi, Big Tom."

Space-armored technicians are running ponderously to cover as the fighter deck is evacuated. The canopy seals, internal pressurization takes over and makes your ears pop, despite the gum you are looping round your back molars; the space door irises open and your fighter moves onto the launch catapult. What is beyond the space door? Vacuum, stars, Zygons. Not necessarily in that order. Tactical display lights blink green, little animated Imperial Astrofighters flash on half a dozen computer screens. You park your gum in the corner of the weapons status display board.

"Primary ignition sequence?"

"Green."

"Energy banks at full charge?"

"Check."

"All thrust and maneuvering systems, astrogation, and communication channels?"

"Okay, Wee Tom. Let's go get 'em. We're the Empire's Last Hope."

A blast of acceleration stuffs your teeth down your throat, flattens your eyeballs to fifty-pence pieces, and grips the back of your neck with an irresistible iron hand as the catapult seizes Astrofighter Orange Leader and shies it at the space door. The wind whistles out of you; everything goes red as the space door hurtles up at you. Then you are through, and, before the redness has faded from your eyes and the air filled your lungs once more, Major Tom has looped your X15 up and over the semi-eclipsed bulk of the miles- and miles- and miles-long "Excalibur," throneship of Geoffrey I, Emperor of Space, Lord of the Shogon Marches, Defender of Altair, Liege of the Orion Arm, Master of the Dark Nebula.

"Astrogation check."

"Enemy force targeted in Sector Green 14 Delta J. Accelerating to attack speed. . . ."

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"Good work, Wee Tom. Orange Leader to Force Orange, sign off. . . ."

One by one they climb away from the "Excalibur," the valiant pilots of Force Orange: Big Ian, The Prince, John-Paul (J.P. to his comrades only), Captain "Kit" Carson, Black Morrisey: nicknames known and respected (and in some places, dreaded) right across the sparkling spiral of the Galaxy. Such is these men's fame that it brings a lump to your throat to see the starlight catch on their polished wing-fairings and transform their battlescarred fighters into chariots of fire.

"Force Orange reported in, Orange One through Orange Five, Orange Leader," you say.

"Okay," says Major Tom with that resolute tightness in his voice you love to hear so much. He waggles his fighter's wings in the attack signal and Force Orange closes up into a deadly arrowhead behind him.

"Let's go get 'em. We've got a job to do."

PRESS CONFERENCE: 11:35 A.M. JANUARY 16, 1987

Yes, the original diagnosis was leukemia, but, as the disease was not responding to conventional treatment, Dr. Blair classified it as a psychologically dependent case . . . no, sorry, not psychosomatic, psychologically dependent is Dr. Montgomery's expression, the one Dr. Blair would like used. Put simply, the conventional chemotherapy was ineffective as long as the psychological block to its effectiveness remained. Yes, the leukemia has gone into complete remission. How long ago? About twelve days.

Gentlemen at the back . . . sir. This is the thirty-eighth day of the coma, counting from the time when the growth of the cancer was first arrested, as opposed to the complete remission. The patient had been in the orthohealing state for some twenty-six days prior to that while the chemotherapy was administered and found to be effective. Yes sir, the chemotherapy was effective only while the patient was in the orthohealing state. It was discontinued after thirty days.

Gentleman from the Irish News . . . The boy is perfectly healthy—now, don't quote me on this, this is strictly off the record, there is no medical reason why Thomas Semple shouldn't get out of his bed and walk right out of this hospital. Our only conclusion is that there is some psychological imbalance that is keeping him, or, more likely, that is making him keep himself, in Montgomery/Blair suspension.

Sir, by the door . . . no, the project will not now be discontinued, it has been found to be medically very effective and the psychological bases of the process have been demonstrated to be valid. International medical interest in the process is high. I might add that more than one university across the water, as well as those here in Ireland, have sent representatives to observe the development of the case, and there is widescale

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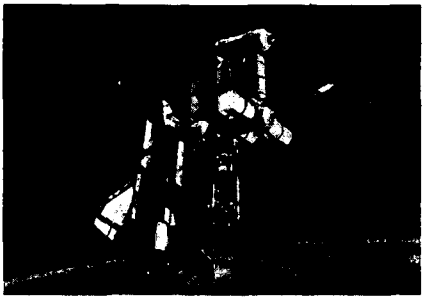

NEXT STOP:
SPACE STATION

". . . I am directing NASA to develop a permanently manned Space Station, and to do it within a decade." . . . President Ronald Reagan, State of the Union message, January 25, 1984.

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commercial interest in the computer-assisted technology for the sensory-deprivation dream-simulation systems. In fact, Dr. Montgomery is attending an international conference in The Hague at which he is delivering his paper on the principles of orthohealing. Yes, sir, I can confirm that Dr. Montgomery is returning early from the Conference, and I wish I knew where you get your information from, but this is not due to any deterioration in Thomas Semple's condition. He is stable, but comatose, in the orthohealing state. Okay? Next question.

Sir, from the Guardian, isn't it? May I have your question. Yes, Mrs. Semple is in attendance by the bedside, we have a room set aside for her on the hospital premises, she is able to see her son at any time and spends most of her time in the ward with him. She will permit photographs, but under no circumstances will consent to be interviewed, so don't bother wasting your time trying. Yes, it was her idea, but we agree with her decision fully. I'm sure you must all appreciate, gentlemen, the strain she is under, after the tragic death of her husband, her only child developing leukemia, and now with the baffling nature of this coma. Next question. I.R.N.?

We have no evidence to cause us to believe that he has drifted away from the programmed orthohealing dream, this would be unlikely as the dream was designed specifically with his ideal fantasies in mind. We believe he is still mentally living out this *Star Wars* fantasy, what we call the Space Raiders simulation program. To explain a little, we have over a dozen archetype programs specifically engineered for typical psychological profiles. Thomas Semple Junior's is a kind of wish-fulfillment arcade-game, only with an infinite number of credits, if you'll pardon me stretching the analogy. The cancerous cells are represented as alien invaders to be destroyed, he himself is cast in the role of Luke Skywalker, the hero. I believe it was the gentleman from the Irish Times who coined the expression "Luke Skywalker Case," wasn't it?

Okay . . . any further questions? No? Good. There's a pile of press releases by the door, if you could pick one up as you leave it'd make it worth the trouble of having them printed. Afraid you won't find anything in them you haven't heard from me. Thank you, gentlemen, for being so patient and for coming on such a foul day. Thank you all, good morning.

(SHUTTLE FLIGHT BA4503 LONDON HEATHROW TO BELFAST: AFTER THE COFFEE, BEFORE THE DRINKS)

Mrs. MacNeill: I couldn't help noticing your briefcase, are you a doctor, Mr. Montgomery?

Dr. Montgomery: Well, a doctor, yes, but not an M.D., I'm afraid. Doctor of psychology.

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Mrs. MacNeill: Oh. Have to be careful what I say then.

Dr. Montgomery: Ah, they all say that. Don't worry, I'm not a psychiatrist, I'm a research psychologist, clinical psychology. I'm attached to the R.V.H. team working on orthohealing, you know, the Luke Skywalker thing?

Mrs. MacNeill: I've heard about that, it was on the News at Ten, wasn't it, and it was on Tomorrow's World a couple of weeks back. That's the thing about getting people to dream themselves into getting better, isn't it?

Dr. Montgomery: That's it in a nutshell, Mrs. . . .

Mrs. MacNeill: Oh, sorry, there's me rabbiting on and never thought to tell you my name. Mrs. MacNeill, Violet MacNeill, of 32 Beechmount Park, Finaghy.

Dr. Montgomery: Well, you already guessed who I am, Mrs. MacNeill. Might I ask what takes you over the water?

Mrs. MacNeill: Ach, I was seeing my son, that's Michael, he's teaching English in a technical college in Dortmund in Germany, and he's always inviting me to come over and see him, so I thought, well now I've got the money, I might as well, because it could be the last time I'll see him.

Dr. Montgomery: Oh? How so? Is he moving even further afield?

Mrs. MacNeill: Oh no. But you could say I am. (LAUGHS, COUGHS) You see Dr. Montgomery, well, I haven't got long. I'm a person who believes in calling a spade a spade. I'm dying. It's this cancer thing, you know? You can't even talk about it these days, people don't like you to mention the word when they're around, but I don't care. I believe in calling a spade a spade, that's what I say. I tell who I like because it won't go away if you don't talk about it, it's stupid to try to hide from it, don't you think? You're a medical man, you should know.

Dr. Montgomery: Psychological, Mrs. MacNeill.

Mrs. MacNeill: You see? The very man to talk to. The trained ear. They picked it up about eight months ago, stomach cancer, well on its way, and they said I only had about a year at the most. I reckon on longer than that, but I'm under no illusions it'll get better. My daughter, Christine, she wanted to put me in that hospice, you know, the place for the terminally ill, but I said, away out of that, all you do there is sit around all day and think about dying and they call that a positive attitude. 'Dying with dignity' they said, but if you ask me, I say you just live a bit less and die a little bit

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more every day until finally no one can tell the difference. Me, I intend to keep on living until the moment I drop. Away out of your hospices, I says to Christine, rather than waste good money on that abattoir give it me in my hand and I'll spend it doing all the things I've always wanted to do and never had the time for. And do you know what, Dr. Montgomery, she gave it to me and I took a little bit out of my savings and I've been having the time of my life.

Dr. Montgomery: Now that's what I call a positive attitude, Mrs. MacNeill.

Mrs. MacNeill: You see? That's the difference between a medical man; ach, I know you're a psychologist, but to me it's all the same, and an ordinary man. You can talk about these things, you can come out and say, 'That's what I call a positive attitude, Violet MacNeill' while anyone else would have only thought that and been afraid to say it in case they offended me or something. But I wouldn't mind, wouldn't mind a bit, what offends me is people not saying what's on their minds. But I tell you this, there's just one thing bothers me and won't give my head peace.

Dr. Montgomery: What's that?

Mrs. MacNeill: It's not me, nothing to do with me, why, I'm having the best time, I've been to Majorca on one of those winter breaks, and to London to see the shows, you know, that Tim Rice and Andrew Lloyd-Webber thing, and I've a cousin in Toronto to see, and I have to get to Paris, I've always wanted to see Paris, in the spring, like that song. I'd love it any time of year, I've got to hang on 'til I've seen Paris. And then there was this joyride to Germany. Which brings me back to what I was talking to you about, don't I ramble on something dreadful? It's the kids I worry about, Michael and Christine and wee Richard, I say wee, but he's a full time R.U.C. man; it's them worries me. Now, I don't care much for dying, but it has to happen and at least I'm not bothering to let it ruin my life, but I worry about what I'm leaving behind. Will the kids ever forgive me?

Dr. Montgomery: That's a very good question, Mrs. MacNeill. Do you feel guilty about dying?

Mrs. MacNeill: See? Asked like a true psychologist. It's all right,

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never worry dear. In a way, it's stupid to feel guilty about dying; I mean to say, I'm not going to care, am I? But then again, I do feel bad in a sort of way because it's like I'm betraying them. I'm like the top layer between them and their own ends, and when I go they move up and become the top layer. Do you understand that?

Dr. Montgomery: I do. Would you care for a drink? Trolley's coming up the aisle.

Mrs. MacNeill: Oh please. Gin and bitter lemon for me. Should cut it out but I reckon when you add up the harm it does and good it's six of one and half a dozen of the other. Now, what was I saying? Oh yes, do you think children ever forgive their parents for dying? When you're wee, your parents are like God; I remember mine, God love 'em, they could do nothing wrong, they were as solid as the Rock of Gibraltar and always would be, but they both died in the bombing in '41 and you know, doctor, but I don't know if I ever forgave them? They'd built my life, they'd given me everything, and then it was as if they'd abandoned me, and I'm wondering if my Michael and Christine and wee Richard will think the same about me. Will they think I've betrayed them, or will I have given them that kick up the backside into being mature? What do you think, Dr. Montgomery? Do children ever forgive their parents for being human?

Dr. Montgomery: Mrs. MacNeill, I don't know. I just don't know.

(THE DRINKS TROLLEY ARRIVES AT SEATS 28C & D AT THE SAME INSTANT AS THE BOEING 757 MAKES THE SUBTLE CHANGE OF ATTITUDE THAT MARKS THE COMMENCEMENT OF ITS DESCENT TO SNOW-BOUND NORTHERN IRELAND.)

She had wished upon a star, the star around which her son orbits, a shooting star, fast and low and bright, diving down behind Divis Mountain. When you wish upon a star, doesn't matter who you are, everything your heart desires will come to you, a cricket had sung to her once upon a rainy Saturday afternoon in the sixties somewhen, but what if that star is a satellite or an Army helicopter, does that invalidate the wish, does that fold the heart's desire back on itself and leave it staring at its reflection in the night-mirrored window? The night outside fills the reflection's cheeks with shadows, and, in the desperate warmth of the hospital room heavy with the scent of sickness, she hugs herself and

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knows that she is the reflection and it the object. Every night the hollows fill up again with shadows from the shadowland outside where Army Saracens roar through the night and joyriders hotwire Fords to cruise the wee small hours away round the neat gravel paths of the City Cemetery or stake their lives running the checkpoints manned by weary police reservists watching from the backs of steel-grey Landrovers with loaded rifles.

Stick them in neutral, he'd told her once, we do that sometimes, stick the Landrovers in neutral and cruise for a couple of hundred yards, then shove them into second and when they backfire it sounds like gunshots. Gets them ringing up the Station—shots heard, Tennant Street, 1:15 A.M. Some of them make it sound like Custer's Last Stand, he'd said. It had made her laugh, once. Last Stand in Shadowland.

Somewhere in the room is the soul of a twelve-year-old boy, somewhere among the piles of junk Dr. Montgomery had suggested might trigger some response from him. Sometimes she thinks she sees it, the hiding soul, like an imp, or like one of the Brownies her mother had convinced her had lived behind the dresser in the farmhouse's kitchen: an imp, darting from under his American football helmet to hide behind his U2 poster, concealed like a lost chord in the strings of his guitar or looping endlessly through his computer like the ghost of an abandoned program. There are his favorite U2 albums, and the cassettes recorded specially for him by John Cleese to try and raise a smile on his face, there is the photograph of Horace, half-collie, half Borzoi, wall-eyed and wild-willed; there is the photograph of Tom Senior.

Tom Senior, who knew all about backfiring police Landrovers, and the room in the station with the ghetto-blaster turned up loud outside it where they used to take the skinheads, and the twelve different routes to work each day. Tom who had always been just Dad to him. No, the soul of a twelve-year-old boy, whatever its color, whatever its shape, is not something that can be captured by computer-assisted machinery or lured back to ground and trapped like a limed song-bird by a junk-shop of emotional relics, not when it is out there in the night flying loops around Andromeda.

As many as the stars in the sky or snowflakes in a blizzard or grains of sand upon a beach, that is how many the Zygon fleet is, wave upon wave of fighters and destroyers and scouts and cruisers and battleships and dreadnoughts and mobile battlestations and there at the heart of it, like the black aniseed at the center of a gobstopper: the Zygon flagship. The enemy is so huge that it takes your breath away, and there is a beat of fear in your heart, for the Imperial Throneship "Excalibur" is but one ship and Major Tom is only one man. Major Tom points his fighter's nose

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dead into the densest part of the pack and leads Force Orange into the attack.

Is he totally without fear? you ask yourself, sweating under your helmet as the sudden acceleration pushes you deep into your padded seat, stamps all over your ribs, and stands forward on its head to become up.

"Where do they all come from?" you whisper to give your fear a name you can hold it by. Major Tom hears you, for privacy is not a thing a fighting team with a Galaxy-wide reputation can be bothered with, and answers.

"Survivors of the Empire's destruction of their capital world, Carcinoma. Must have got the Zygon Prime Intelligence off before we blasted Carcinoma, and now they're here, grouping for another murderous attack on the peaceful planets of the Empire. And we've got to stop them before they destroy the entire universe. A battlefleet could fight for a hundred years and still be no nearer the flagship of the Prime Intelligence, but a small force of two-man fighters might, just might, be able to slip past their defenses and attack the flagship with pulsar torpedoes." And now he says into the relay channels you have opened for him,

"Orange Leader to Orange One through Five, accelerate to combat speed. Let's go get 'em boys. The destiny of the Empire is ours today."

How you wish you could make up lines like that, words to inspire men and send them into battle, words that wave the star-spangled banner of the Galactic Empire, words that make the hair prickle under your helmet and proud tears leak from the corners of rough-tough space-marines' eyes. You think that it might not be such a terrible thing to die with words like that ringing in your ears.

Your targeting computer has located the cluster of Zygon dreadnoughts and fighters protecting the flagship of the Prime Intelligence. The first photon blasts from the battleships' long-range zappers rock your X15 as the enemy fighters peel out of formation to intercept. Opaque spots appear on your visor to screen out the searing light of the photon blasts.

"Orange Leader to Force Orange," says Major Tom, "I'm going in."

"Tactical computer available," you say.

"Forget it, son, Major Tom does his own shooting." Your thumbs twitch on imaginary triggers as Major Tom locks a Zygon fighter in his sights and blasts it with his laser-zappers. The black alien spacecraft unfolds into a beautiful blossom of white flame. Already Major Tom has another in his sights. Swooping up and away from the nuclear fireball, he rolls the X15 and downs another. And another, and another, and another . . .

On your tactical display a green grid square flashes red.

"Big Tom, one on your tail!"

"I mark him. Orange Leader to Orange Two, Big Ian, I've a bogie on my tail. I'm going for the big one, the flagship." He throws his fighter

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into a rapid series of bounce-about evasive maneuvers. A sudden flare of fusion-light throws your shadow before you onto the astrogational equipment as the Zygon pursuit ship explodes into a billion billion sparkling fragments. Orange Two thunders in to parallel your course. The daring star-pilots exchange greeting signals, and Orange Two rolls effortlessly away into a billion billion cubic light-years of space. Ahead, the Zygon flagship is sowing fighters like demon seed and now its heavy-duty laser turrets are swinging to bear on you. Photon-blasts fill the air like thistledown on a summer's day.

"Hold on to your seat, kid, this calls for some tight flying," shouts the voice of Major Tom in your helmet radio earphones, and he twists, turns, spins, loops, somersaults, and handstands the X15 past the criss-crossing Zygon fighters and the laser-fire from the flagship. The immense metal bulk of the enemy ship swells up before you, so close that you can see the space-armored gun-crews at their batteries.

"Arm pulsar torpedoes smart systems."

Click switch, press button; green lights reflect in your visor.

"Pulsar torpedoes armed." The infinitesimal white X15 Astrofighter hurtles over a crazy metal landscape bursting with laser-fire. Before you loom the engine ports, ponderous as mountain ranges, vulnerable as free-range eggs. Your mouth is dry, your hands are wet, your eyeballs are as dessicated as two round pebbles. Red lights . . .

"Squadron coming in behind us, fast." The metal landscape blurs beneath you: this alien vessel is so huge. . . .

"Damn. Orange Leader to Force Orange, what happened to the cover? Mark three bogies on my tail, take care of 'em, I'm going for the engine ducts . . . five . . ." The iron mountains open like jaws—"four." On your rear screen three evil black Zygon pursuit ships slip into tight cover . . . "three . . ." You veer down a sudden valley in the huge geography of the Flagship's drive section . . . "two . . ." ahead is the white doomsday glow of the stardrives . . . "one . . . Fire." Orange Leader climbs away from the engine pods. The pursuit ships come after you, never seeing the tiny blob of light detach itself from your fighter at count zero and steer itself down the engine tubes into the miles-distant bowels of the enemy flagship. Major Tom loops twelve thousand miles high above the doomed starship and declares, "detonation!"

At first there is nothing, as if it had taken time for Major Tom's voice to travel across space and the torpedo to hear him, but then, as if by his express command, the Zygon Flagship silently expands into a rainbow of glowing particles. The afterblast paints the cockpit pink, a beautiful bathroom pink. The glow takes a long time to fade, a man-made sunset.

"Yahoo!" you shout, "Yahoo! We got him!"

"We sure did," says Major Tom, "son, we sure did."

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"What now?" you ask, "take care of those pursuit ships and then back to 'Excalibur'?"

"Not yet," says Major Tom and there is a strange note in his voice that reminds you of something you have purposefully forgotten. "We're pressing on, continuing the attack on our own, because there's a planet out there beyond the lines of Zygon ships, a planet hidden for a million years away from Galactic knowledge, and we, and we alone, must go there to destroy Zygon power for ever."

PRESS RELEASE: DECEMBER 22, 1986 (Extracts)

. . . the concept of the "Mind Box," the baggage of beliefs and values which determines the individual's reactions to the events of his life. Research into depression has shown the relationship between psychosomatic symptoms and the state of the individual's "Mind Box." Dr. Montgomery hypothesised in his doctoral thesis that this Mind Box concept might account for many of the more severe medical cases which are never diagnosed as psychosomatic but which otherwise have no medical reasons for their lack of response to conventional treatment.

. . . developed "deep dreaming" from Luzerski and Baum's work on lucid dreams, dreams in which the dreamer exerts conscious control over the content of his dream. It is a highly refined version of Luzerski and Baum's dream techniques whereby the individual enters a state of interactive dreaming through a hypnotically and chemically induced process and effects the necessary repairs to his damaged Mind Box, thus relieving the psychological pressures that have led to his deteriorating medical condition. It could be said that he literally dreams himself into a state of self-healing. Dr. Blair has related this effect to the Nobel prizewinning Stoppard/Lowe theories of molecular iso-informational field-zones of order generated by individual protein molecules which stabilize genetic material against interference and mutation from electromagnetic and gravitic fields. He argues the analogy of deep dreaming: "returning" the body's iso-informational fields to a state of biological and psychological metastasis, or "Harmony," which renders the patient—at the cellular level at least—responsive to conventional treatment.

Thomas Semple, Jr. is the process's pilot case. The patient, a twelve-year-old boy, contracted leukemia shortly after the death of his father, a police sergeant. He was admitted to hospital but did not respond to conventional chemotherapy.

. . . Doctors Montgomery and Blair have created a deep-dream scenario for young Thomas analogous to the computer games of which he is fond. In this dream simulation he plays the hero of a space-war arcade game shooting down invaders which are representations of the cancerous cells within him. He spends fifteen hours per day in this deep-dream suspen-

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sion during which normal chemotherapy is administered. His dream state is constantly monitored by state-of-the-art computer technology which also maintains his illusion of deep-dreaming by direct stimulation (in sensory deprivation) of the neurons, both chemically and electrically. . . .

. . . During his waking periods he talks constantly about how exciting the space-war dream is and Doctors Montgomery and Blair are confident that their first case using this orthohealing process will be a complete success.

(THE FRONT SEATS OF A VAUXHALL CAVALIER REGISTRATION GXI 1293, SOMEWHERE ON THE MOTORWAY BETWEEN BELFAST AIRPORT AND THE ROYAL VICTORIA HOSPITAL. SCENERY: RAPIDLY MOVING PANORAMA OF SNOW-COVERED FIELDS AND MOTORWAY EXIT SIGNS. SETTING: TABLEAU FOR TWO CHARACTERS.)

Dr. Montgomery: How was the press conference then?

MacKenzie: Don't ask.

Dr. Montgomery: That bad? Oh come on, things haven't gotten any worse, the kid's stable, there's no cause for media panic, is there? Never was.

MacKenzie: If you really want to know, they're trying a human interest angle on the mother—you know, tragically widowed policeman's wife, her son struck down by you-know-what, can't mention cancer in the tabloids, hurts circulation; well, now to compound her suffering, this ancy-fancy untested medical experiment goes sour on her. That's what they were trying to get me to say at the press conference. Never again. Do your own next time.

Dr. Montgomery: Bastards. I take it you didn't—say anything, that is.

MacKenzie: Not a word.

Dr. Montgomery: Good girl yourself. Which papers?

MacKenzie: As I said, the tabloids: Mirror, Sun, Star, Mail, Express.

Dr. Montgomery: Bastards.

MacKenzie: Mrs. Semple's keeping them all at bay at the moment, but it's only a question of how long it is before some hack cons his way past the nurses and waves a checkbook under her nose.

Dr. Montgomery: Damn. Why all the sudden interest?

MacKenzie: Don't know. Some local must have picked up on the story and now the crusaders are waiting to take you

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apart the moment you get back there, Saladin. Gave me a rough enough time of it.

Dr. Montgomery: And drag the hospital's name through the mire. You didn't . . .

MacKenzie: Let them know I was in charge of simulation software and the computer systems? Think I'm stupid? Not a breath.

Dr. Montgomery: Thank God. (LOOKS AT THE SNOW AND IS SILENT FOR A WHILE) Roz, tell me, do you think children ever forgive their parents for dying?

MacKenzie: Wouldn't know. Mine are both disgustingly healthy. Better shape than I am.

Dr. Montgomery: You tell me what you think of this then. I'll review some facts about the case and you say what you think. One. Thomas Semple Junior's leukemia is cured but he still remains in the orthohealing coma which cured him. We assume he's still deep-dreaming because there's been no change in his vital signs between the two situations.

MacKenzie: Fair enough assumption. Two.

Dr. Montgomery: Two: in such a state of lucid dreaming, he can be anything he wants to be, anytime, anywhere—subjectively speaking—he exists in his own private universe where everything is exactly as he wishes it to be.

MacKenzie: Within the program parameters.

Dr. Montgomery: Well, that's your field of competence, not mine. Three: his father, a sergeant in the Royal Ulster Constabulary, was killed before his eyes by a bomb planted under his car.

MacKenzie: Deduced by yourself to be the neuropsychological basis of the leukemia.

Dr. Montgomery: And his lack of response to conventional therapy, yes. Hell, twelve-year-olds shouldn't have death wishes, should they?

MacKenzie: You were the one who thought it was displaced punishment behavior.

Dr. Montgomery: Every other Tuesday I think the moon is made of green cheese and life is worth living after all. Listen to this: I think we have given Thomas Semple Junior the perfect environment to recreate his father. Now he does not have to die to join him, he has him all the time, all to himself in that dream-world of his. The

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kid can't face a world where his father was blown to bits by an I.N.L.A. bomb, he can't face the reality of his father's death, and now he doesn't have to when he can be with his father, his perfect idealized father, forever in the deep dream state.

MacKenzie: That's spooky.

Dr. Montgomery: That's all there is. What do you think?

MacKenzie: Did you think all this up on the plane over?

Dr. Montgomery: I got into conversation with the woman next to me—talk about strange bedfellows, airline booking computers lead the field—she had cancer, one of those six-months-to-live cases and she was a talker, you know how some are, it makes it easier for them if they can talk about it; well anyway, in the middle of this conversation she mentioned that she feared that her children would never forgive her for dying and leaving them alone in the world. Paranoid maybe, but it started me thinking.

MacKenzie: It fits. It all fits beautifully.

Dr. Montgomery: Doesn't it? I reckon if we go through the print-outs on the dream-monitors we'll find Thomas Semple Senior in there large as life and twice as handsome, because his orphaned son is punishing him over and over and over again.

MacKenzie: And what then? You going to exorcise his ghost?

Dr. Montgomery: Yes, I am.

(OVERHEAD GANTRIES BEARING SIGNS READING M1, CITY CENTRE, M5, CARRICKFERGUS, NEWTOWNABBEY, BANGOR, LISBURN, APPEAR ABOVE THE CAR. *MACKENZIE* SLIDES THE VAUXHALL CAVALIER INTO THE LANE MARKED CITY CENTRE.)

She wishes they would go. She resents their noisy feet, their busy bustle, their muted conversations over rustling sheets of computer print-out, their polite-polite "Mrs. Semple excuse me buts" and "Mrs. Semple, do you know ifs" and "Mrs. Semple, could you tell us whethers." What are they doing that is so important that they must stamp around in their noisy shoes and remind her of the world beyond the swinging ward doors? She does not like them near her son, though the man is the doctor who invented the process and the woman is the one who developed the computers to which her son is wired from skull eyes ears throat. It worries her to see their hands near the machines, she fears that they might press buttons and throw switches and she would never know why they had

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done so. She hates not understanding and there is so much she does not understand.

They are talking now, excited about something on a computer screen. She can see what it is that has excited them, though she cannot understand why. Who is this "Major Tom?" The empty coincidence of names does not fool her. Major Tom, Major Tom . . . she remembers a song she had once heard about Major Tom, the space man who never came down. Wasn't that it, Major Tom, the space man, still orbiting round and round and round the world in his tin-can? She never knew Major Tom. But she knew Sergeant Tom, Sergeant Tom tall and lovely in his bottle-green uniform, Sergeant Tom photographed in his swimming trunks on a Spanish beach, brown and smiling, with that little Tom Selleck moustache, Sergeant Tom sitting at the breakfast table in his shirt-sleeves, shoulder holster and police boots waiting for the phone call which would tell today's safe pick-up point, Sergeant Tom putting on his jacket, kissing her on the lips and telling Wee Tom to have a good day at school and take care with his head-sums. Sergeant Tom walking out to the Ford Sierra, Sergeant Tom turning the key in the ignition. . . .

"Mrs. Semple, Mrs. Semple."

Faces loom before her, changing size and distance as her eyes focus.

"Yes, Dr. Montgomery?"

"We'd like your permission to try something we think will bring your son out of his coma."

"What is it you want to do?" The weariness in her voice surprises her.

"Adapt the program parameters slightly. Ms. MacKenzie wants to inject new material into the dream simulation."

"You've tried that before. You tried switching off the machines altogether."

"I know, Mrs. Semple. It didn't work." The young doctor (how can anyone as young as he have the experience to mold people's lives?) completes her thoughts for her. He is clever but naïve. She envies him that. "Thomas merely maintained the dream-coma by exercise of his own imagination. No, what we want to do is inject something into the dream so unacceptable that his only escape is to come out of the deep-dream coma."

"And what is that something?"

"I'd rather not say at the moment, Mrs. Semple, in case it doesn't work."

"And if it doesn't work?"

"Then you and he are no worse off than you are now."

"And if it succeeds?"

"Do I really have to answer that question, Mrs. Semple?"

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"Of course not. All right then. You have my permission, and my blessing."

"Thank you, Mrs. Semple. O.K. Roz."

What long fingers the girl has! She cannot get over those long, slender fingers as she types on the computer keypad. They are more like tentacles than fingers. Her attention is torn between those dancing fingers and the white words that float up on the green screen.

PROGRAM "LUKE SKYWALKER": INTERRUPTIVE
MODE CHANGE: IRRAY 70432 GOTO 70863:
READ: KILL MAJOR TOM
KILL MAJOR TOM

At the peak of the entry, when the X15 bucked and bounced like a bad dream from which you cannot waken and every bolt and rivet shuddered and your teeth shook loose in your head, the deflector shields glowed a violent blue and the fighter's ionization trail plumed out behind you like a shooting star on an autumn night. There had been a moment (just a moment) when the fear had won, when your trust in Major Tom's skill had not been its equal and you had seen your ship burst open like a drop-kicked egg and you hurled screaming and burning into three hundred miles of sky. The shriek had built in your chest and rattled the bars of your teeth and your brain had pounded pounded pounded against the dome of your helmet. Then you had come out and the air was smooth and the deflectors glowed a dull cherry red and your trusty fighter was dipping down through the miles of airspace to the carpet of woolen piled clouds.

Now there is fear again, not the fear of disintegration in the ionosphere, for that is only death and to die is to leave the self and join the others, but the fear of what waits for you below the cloud cover, for that is more terrible than death, for it denies the other and leaves you alone with only yourself.

"Big Tom, we must go back! 'Excalibur' has been calling and calling, Captain Zarkon, even the Emperor Geoffrey himself, have been ordering you to turn back. It's too dangerous, you are forbidden to go any further alone!"

Major Tom says nothing but thrusts your X15 Astrofighter lower, lower, lower. Clouds shred like tissue-paper on your wing-tips, the fog swirls and thins patchily, then you are out of the cloud-base and below you is the surface. The Montgomery/Blair engines thunder as Major Tom throttles back; he is coming in for a landing and your stomach, now gripped firmly by six billion billion billion tons worth of gravity, is doing flip-flops, a sicky-lurchy feeling that overcomes you as he throws the X15 into a left-hand bank.

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The ground is tip-of-the-nose close beyond the canopy, a forbidden planet standing on edge in mid-bank: red-brick neo-Georgian bungalows in fifteen hundred square feet of white-chained garden, trailers in the drive, boats and run-about second cars parked outside, rose beds flowering, children on BMX's, stopping, pointing, gaping.

"Commence landing sequence."

You do not want to. You cannot go down there. To go down there is dying and worse. A billion billion billion miles away "Excalibur," the Imperial Throneship, hangs poised on the lip of jumpspace but its stupendous bulk is as insubstantial as a cloud compared to the painful truth of this place, so pin-sharp that you can even read the street name: Clifden Road. Suddenly you are no longer Wee Major Tom, half of the greatest fighting team the galaxy has ever known. Suddenly you are a small boy who is twelve years old and more frightened than he has ever been before.

"Commence landing sequence," orders Major Tom.

"No!" you wail wanting beyond want to hear the words which will make it all right, the words which would make men glad to die in the hollowness of space. "I want to go back! Take me back!"

"Commence landing sequence," says Major Tom again and there is nothing in his voice but determination and command.

"Landing sequence initiated," you sob, touching heavy fingers to cold control panels. Landing shocks slide from their fairings and lock with a thump. The engine noise rises to a scream. Major Tom brings the X15 Astrofighter in low above the rooftops like Santa Claus on his sled and stops it dead in the air over the turning circle at the end of the street. Housewives' morning coffees grow cold as their imbibers stand in their picture windows, babies in arms, to view the spectacle of the Astrofighter touching down. Whipped into tiny tornadoes, dust eddies chase down the street away from the down-draught. There is a gentle touch, as soft as a mother's finger upon a nightmared cheek: touchdown.

"Power down," says Major Tom, but before the noise of the engines has whispered away to nothing his canopy is open, his harness unbuckled and he is running down the street to a house with number 32 on the gatepost and a lovely white-and-tan hearth-rug dog lying on the front step. Behind that picture window, too, there is a woman, with a coffee-cup in one hand and the head of a small boy of about twelve under the other.

Then the world folds up on itself like one of those paper fortune-tellers you used to make in school. Major Tom's tight shiny uniform rips and shreds as he runs and the wind whips the scraps away to reveal a new uniform beneath, dark green with silver buttons. An X15 Astrofighter lifts into the air above Clifden Road on a pillar of light, canopy open and climbs away into forever. Your uniform is gone, and the gentle pressure

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on your head is not the pressure of a helmet but the pressure of a small, slender hand and you realize that you are the boy in the window as the X15 dwindles into a shining dot and winks out. You are held, you are trapped under the gentle hand, marooned on the Planet of Nightmares.

Now Major Tom is at the car and he waves at you and all you can do is wave back at him for the words you want to shout, the warnings you want to scream, rattle round and round and round your head like pebbles in a wave and will not be cast out. Now he has the door open. Now he is in the car. Door shut, belt on, key in ignition. . . .

This time you know the blast for what it is. The time you are prepared and can appreciate its every vital moment in dreadful action-replay.

The ball of light fills the interior of the Ford Sierra. An instant after, still twilit by the killing light, the roof swells up like a balloon and the doors bulge on their hinges. Another instant later the windows shatter into white sugar and then the picture window before you flies into shards, a gale of whirling knives carried on a white wind that blasts you from your feet and blows you across the room in a whirling jumble of glass and smashes you into the sofa. The skin of the car shatters and the pieces take flight. The hood follows through the window to join you on the sofa. The roof has blown clean away and is flying up to heaven, up to join God. The car roars into flames and within the car, behind the flames, a black puppet thing gibbers and dances for a few endless moments before it falls into crisp black ashes.

A red rain has spattered the wall-paper. There is not a window intact on Clifden Road. Your mother is lying at a crazy angle against the door, her dressing-gown hitched around her waist. Out in the drive the pyre roars and trickles of burning fuel melt the tarmac. Smoke plumes into the sky, black oily smoke, and there at the place where your eyes wander, the place where the smoke can no longer be seen, there is a bird-bright white dot: an Imperial X15 Astrofighter coming in from space, and you know that now it must happen all over again, the landing, the running Major Tom, the strange transformations, the man in the green uniform stepping into his car, the explosion, the burning, the Astrofighter coming in for a landing, the changes, the blast, the burning, landing blast burning, blast burning blast burning blast burning over and over and over.

"Major Tom!" you cry, "Major Tom, don't leave me! Daddy! Daddy!"

When the alarms had sounded, when the flashing lights had thrown their thin red flickering shadows across the floor, she had said to herself: He's dead, they have lost him, and though the world had ended she found she could not bear any hatred in her heart for those who had killed her son. They had acted in good faith. She had consented. All responsibility was hers. She could forgive them, but never herself. God might forgive

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Catherine Semple, but she never would. Gone, she had thought, and had risen from her chair to leave. Empty coffee cups and women's magazines covered the table. She would slip away quietly while the alarms were still ringing and the lights still flashing. Nurses' running footsteps had come chasing down the corridors, but at the door the sudden, terrifying quiet had stopped her like ice in her heart. Then after the storm came the still small voice, pitifully frail and poignant.

"Major Tom! Major Tom! Don't leave me! Daddy! Daddy!"

"I won't," she had whispered. "I won't leave you," and everything had stopped then. It was as if the whole city had fallen silent to hear the cries of the new nativity, and then with a shudder the world had restarted. Lines had danced and chased across oscilloscopes, rubber bladders had breathed their ersatz breaths, valves had hissed and the electronic blip of the pulsebeat had counted out time. But even she had known the difference. The red lights which had been red so long she could not remember them being any other color were now defiantly green, and though she could not read the traces she had known they were the normal signs of a twelve-year-old boy waking gently from a troubled, healthy sleep. She could feel the warmth from his bed upon her skin and smell the smell that was not the reek of sickness but the smell of sickness purged, disease healed.

She remembers all this, she remembers the nurses, she remembers the handshakes and the hugs and the hankies, she remembers Dr. Montgomery's lips moving but the words escape her, for time has been jumbled up and nurses, reporters, doctors, photographers, are all stacked next to each other without meaningful order, like a box of antique photographs found in an attic. She remembers flashguns and journalists, video cameramen trailing leads and sound engineers, television news reporters; she remembers their questions but none of her answers.

Now she sits by the bedside. There is a cold cup of coffee on the arm of her chair which the friendly nurse from County Monaghan had brought her. Dr. Montgomery and the MacKenzie woman, the one with the look of computers behind her eyes, answer questions. She does not pretend to understand what they have done, but she knows what it might have been. Ignored for a while she can sit and watch her son watch her back. Unseen by any cameras, eyes meet and smile. There has been pain, there will be pain again, but now, here, there is goodness.

Outside it seems to have stopped snowing but by the cast of the darkening sky she knows it will not be for long. The lights of an Army Lynx helicopter pass high over West Belfast, and if she squeezes her eyes half shut she can make herself believe that they are not the lights of a helicopter at all but the rocket trail of Major Tom, flying home from Andromeda. ●

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PERCEPTION BARRIERS

"The old-fashioned human mind may be simply incapable of grasping some of the laws of nature, either those governing the physical universe of galaxies and atoms or those operating within the brain itself."

Nigel Calder, *The Mind of Man*

Take the case of Phineas Gage in 1848
and the four foot steel bar
that blew through his cheek and forebrain
like a deadly kamikaze wind.
He does much to dispel the view
that sentience is exquisite
as a frilly, fiery orchid
high in a Brazilian wild fig,
or that the brain is delicate as indian
pipe dangling on its waxy pole
like a ghostly white pineapple.
After all, he joked about it for 20 years,
losing little but his good will,
and gaining an erratic behavior.

Our minds, then, are not parasitic,
or pale as mushroom buttons,
but heavy, healthy, blood-engorged
fruit perched on their stems.
They seem hardly and common
with their neurons
blinking as constant as taxi
lights in the busy night city.

Perhaps the final mysteries of science
are guarded by the event horizons
of our deep
intractable misconceptions.
Perhaps this thought is also suspect.

—Robert Frazier

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by Karen Joy Fowler

THE WAR OF THE ROSES

"The War of the Roses" looks at a hard question: which is more valuable, to preserve human life or to preserve knowledge? At first glance the solution may seem self-evident, but Ms. Fowler shows us that the answer to this problem may be an unsettling and complicated one.

art: Daniel R. Horne

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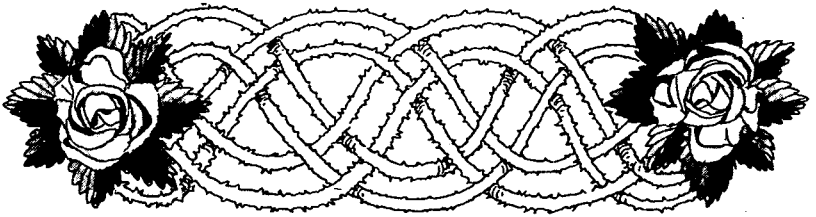

I never thought of my village as a flowering place. It was homes, built closely together, with fields and gardens reserved for practical crops which could be eaten, sold, or woven into cloth. Such crops have their own blossoms, of course. We didn't use them, so I didn't notice them. And there must have been wildflowers. Somewhere in my memory is the bitter taste of buttercups, the sweet suckings of clover. How could I know such things? These are weeds. The enemy. We rid ourselves of these before they ever came to flower.

I am being honest with myself. I have done the best that I could do. I never thought I was chosen to lead the assault on the rose guild through any particular merit. I was a poor shot and an indecisive leader. Two qualities, I believed, recommended me to the committee. The first was my age. I was sixteen, born after the revolution, and therefore sounder politically than my elders who'd had much to unlearn in their lives. The second was my expendability. Not that the assault was considered hazardous. The rifles were for show only; we knew the rose guild would have no weapons. But the time frame was uncertain. It might take a month. It might take six months. I had not begun specialized training of any kind. I was not ready to bear a child. However long I was gone I would not be missed. Those who accompanied me were also essentially unnecessary.

I thought Silas too old to make the trip, yet he was chosen as our guide. We were ferried over the river, then Silas led us up our side of Sleeping Man Mountain. Years ago, he had walked this route in reverse, being outside the border when the revolution called its children home. He had passed the rose guild, already building—"and the trellises before the roofs," he said—in a valley the mountain hid from us. When he told this to our new leaders, many had wanted to go after the rose guild at once, angered that they would flee the revolution, steal their time and labor from the people. Instead, the committee had voted to close the borders. Forget them, the committee said. We will go for them when we need roses. It became our saying for the time which never comes. "When we need roses . . ."

I spent the first days of the journey watching my feet, trying to put

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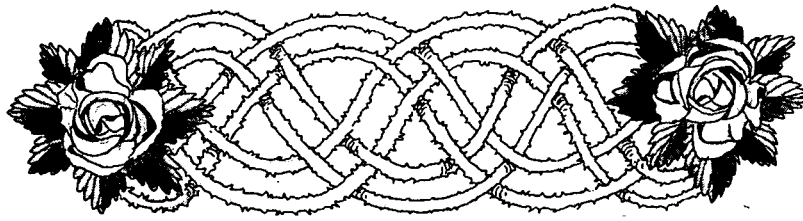

them where Silas had put his. The terrain was rough; the land opposed us. Although we are used to labor, this kind of work was new. On a long journey—from my village, say, to the next—fatigue can be conquered with a kind of mindlessness. You forget yourself, become walking, become one foot in front of the other. Here there was no path. Each footstep required a decision. The straps of my pack rubbed twin lines of red skin on my shoulders and I longed to lighten myself of the ridiculous rifle. Yet none of us complained. Not Ruben, who, at thirteen was the youngest. Not Angel, a childless widow of thirty-four. Not Silas who, moved more and more slowly uphill. And not me. I was proud of us. We are the new men and women, the flower of the revolution. We carried our guns and our demands against the rose guild; against people who had chosen before to use their skills to grow roses when children were starving around them. I could not even imagine such wickedness.

Later I was able to look up and about me at the land we crossed. I had never seen a wild country and as Silas' progress became more painfully slow, I could take in the trees, the plants that grew in their endless shadow, the water running white, always finding the easiest way downhill. There was a special silence, beyond our footsteps, below the noise of the water, an homage the forest paid to us, the intruders. And finally, after many days, we stood and looked down at the roofs of the rose guild and even the roofs had gardens on them.

I felt as though we could jump from here to there; instead it took another two days to reach the guild. We spent our last night in a meadow and woke to find a herd of deer cropping the weeds between us. The deer were aware of us, but strangely unafraid. Perhaps the guilders walked in this meadow often, I thought. Perhaps people were not so unusual here. "I wonder if we shall ever have to eat meat," Angel said quietly. It was the only reference I remember to the fear which had triggered the assault. Then Ruben rolled to his rifle, sighted down it. The bullet entered the deer's chest, which went red. Its thin legs folded beneath it. I saw the eyes, wide and startled, dim before they comprehended. The rest of the herd vanished.

I was angry. "Why did you do that?" I demanded. "Killing with no point to it. And the valley will have heard."

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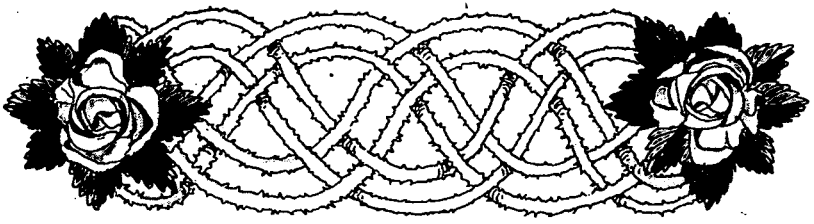

"Let them hear," said Ruben. "Let them know what kind of people are coming to them now. Let them spend the day expecting people with guns."

"I will decide what is shot and when," I told him, and he would not look me in the face, gave me no answer. My eyes went beyond him to Angel and I remembered her words. It was hard to see the corpse, the compact fit of flesh to bone, and think of it as food. It was sickening to try. We moved away from it to eat our usual breakfast of cereal and coffee. No one spoke to Ruben. I had to force myself to chew, force myself to swallow. The killing had awakened me at last to the realities of the assault. Not that I would be shooting anyone. Merely threatening it convincingly. I asked myself for the first time if I could do that.

Late that afternoon we stood outside the gates of the guild, ancient iron gates which I examined with awe. They must have been brought here. Some people had traveled the same route as we, but had carried these enormous grilles. I pictured them, bent like a dozen turtles under a single shell, the gate on their backs, picking their way up Sleeping Man Mountain. But I knew the picture was wrong. No one could do that. There must have been another way. Silas reached through the grille to open the gate from the inside. It swung away from us and we entered.

Outside, the walls had been bare. Inside, they appeared to be little more than excuses for the trellises nailed along them. At the base of each trellis was the squat, severely pruned trunk of a rose bush, no flowers, just a knot of old wood and thorn. Ahead of us was the guildhouse. I don't know what I had expected. Perhaps the opulence of corruption. Instead the guildhouse looked much like our own homes, simple, unadorned, though much larger. We learned later that what we had assumed initially to be several small dwellings was, in fact, one large hall. The guildhouse was built in a square around an inner courtyard and the entire guild lived in it.

A man came to the central door and called out to us, ritual words of greeting so ancient their meaning was lost on me. His clothes, in cut and fit loose and utilitarian, had been dyed a purple only seen in the sunset. I was conscious of Ruben, shifting his rifle beside me, and I gripped his arm tightly enough to carry a message of discouragement.

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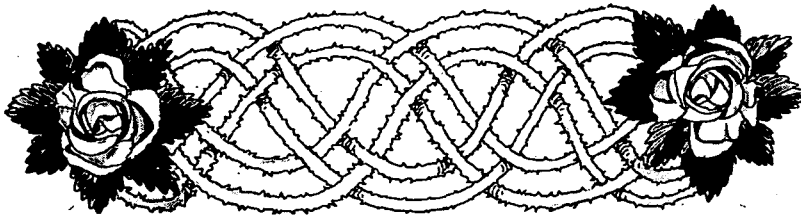

"We are the representatives of the people's revolution," I said. "We wish to make a proposal to the rose guild."

"Then come inside," the man answered, but Silas, Angel, Ruben, and I were frightened suddenly and uncertain. Or perhaps I should speak only of my own feelings. On the journey, being a leader had seemed to mean only that others would do as I asked. I was sixteen. I had no sense of the leader's responsibility to those who followed, had done nothing to win their loyalty or their respect. I needed neither, since the committee had both. Now I saw the decisions which lay ahead of me and how much depended upon making them correctly. It was up to me to bring the rose guild home and I knew they would not come willingly. So I stood just inside the gate and the uncertainty of that first decision almost overwhelmed me. Should we enter the guildhouse? Could it be a trap? Would I look foolish and cowardly if I refused to enter? Could I send Silas before me?

I raised my eyes to examine the man again. I judged him to be in his middle twenties: old, he seemed to me then. His posture was relaxed; he waited with apparently an endless patience for my answer. "Ruben and I will go," I said to Silas. "You and Angel must wait at the gate." I still held Ruben's arm; now I pulled him forward with me. The man stood to one side, forcing us to precede him through the door. It closed behind us. We were in the center of a long, bare hall. I smelled the clean wood smell of the forest. Facing us was a second door which the man indicated by extending his hand. "Go into the garden," he said. "I will bring you coffee and also for those who chose to stay outside."

In my dreams there are still times when I am confronted by doors. I open one and there is another behind it, and another behind that, and I must force myself to keep opening them, all the while aware I am coming closer to something I will not want to have found. My uncertainty made me snap at Ruben. "Do exactly as I tell you," I said, "and nothing I have not told you. If they have prepared a trap for us, it will be because they were expecting us, and if they were expecting us, it will be because they heard your stupid shot this morning."

Ruben showed no signs of remorse. "The rose guild prohibits the use

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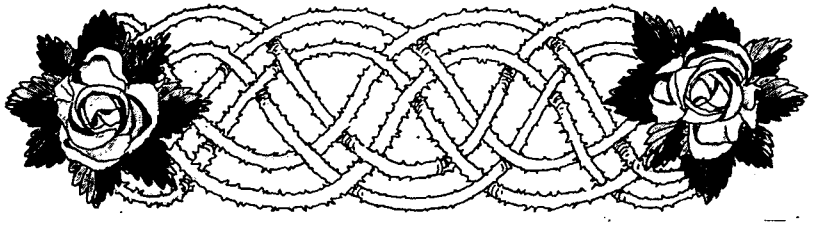

of coercion," he said. "Didn't the committee tell you that? For hundreds of years their rules have always been the same."

"I know," I answered sharply. "Did you think the committee would choose me to lead and then brief you more thoroughly? Don't be so stupid." The exchange left me even more insecure. If I couldn't convince Ruben of my authority what hope had I in persuading the guild? I opened the door and stepped into the garden. I did it to show Ruben I could.

Garden is a word we use also, but never to describe such a place as that courtyard. It was cold, as wintry as anywhere we had passed on the mountain, yet roses bloomed about us, scented the air, scattered petals thick as snow upon the ground. Black roses, blood roses, blue roses. A woman about my age and similar to me in other ways, dark hair, gray eyes, knelt beside the black flowers with a pair of shears. She rose to a height slightly above mine. Her face did not welcome us. "You may sit over there." She gestured with the scissors to a protected alcove which held a small table and four chairs. To my surprise, we were warm enough. The sun was bright and the courtyard admitted little wind. I looked again at the roses, noting their differences—large, loose buds, small and perfect flowers, rose trees, rose vines, stalks of roses. And their similarities—the lushness, the health of the plants, the courage to bloom through the winter. I had never doubted the committee, yet for the first time I began to *believe* that the help we needed was here.

The coffee came, the man who brought it enough like the woman to be her brother. I thanked him, but he left without a word. I drank and felt warm and comforted by the beauty around me. And then I felt angry, because no one came to speak with us and we were being kept waiting like petitioners instead of soldiers of the revolution and once again I was convinced I was doing it wrong.

I called out to the woman who had continued to prune, collecting the severed blooms into baskets, examining each leaf for something she did not find. "I'm not in a mood to wait any longer," I said and shifted my rifle conspicuously. She spread the blades of her shears before a vine of blue roses, set her mouth in a straight line, the lips pressed together. I could see the effort it took, but she responded politely.

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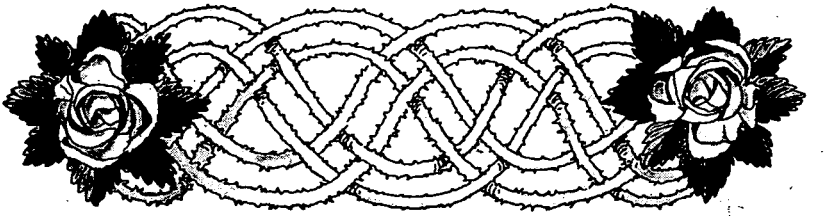

"There is no one free to speak with you now. The guild is at work. We have made you as comfortable as we can—if your friends outside are less comfortable it is not because we lacked the courtesy to invite them in. Grandfather is holding class. In an hour, perhaps more if there are questions, he will come and speak to you." She turned back to the vine and the blades she had opened before she spoke, closed now over a budding stem.

I stood, angry at the answer, embarrassed before Ruben. But I let my rifle dangle slack at my side. If I used it now, just to begin the interview, what would I have to threaten with later? "Go and get your grandfather," I said and tried to suggest with my tone that I anticipated no argument.

She looked at me for one long moment, then dropped the shears onto the basket of clippings. "Very well," she said curtly and disappeared through a door on our left. She returned behind an old man, hairless except for the white beard on his face, older even than Silas. His garment was a pale yellow.

He seated himself at our table and looked into our faces without seeming to notice the guns. "It is nice to see children from home," he said, almost as if he believed it.

"We are not children," I told him, trying not to sound as if we were. Not awkward. Not frightened. Amused, as an adult might be amused by a joke she understood, but did not expect anyone else to. "We are the sons and daughters of the people's revolution. Your home no longer exists, and we are all new men and women there."

Now it was his turn to be amused. "Yes?" he asked and glanced at last at our rifles. "How like the old men and women you look." He motioned to the young woman to continue her work, accepted coffee from the young man who had appeared, served it, and disappeared. "A nice day," he said, taking a sip. "Inside the garden, spring. Outside, fall creeping into winter. An unusual time for a trip through the mountains. Why have you come?"

I looked into the black cloud of coffee in my cup. The sunlight gave it a pearled surface; many colors floated on the one. I tried to frame my answer with the right combination of force and of appeal. "The revolution has been endangered by crop failures," I told him. "The wheat has rotted

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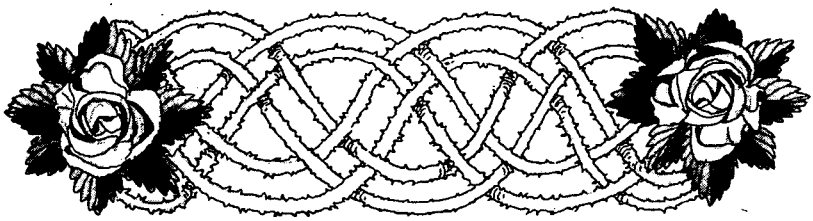

at the roots and produced nothing which could be eaten or planted. The new seeds shrivel before we put them into the ground."

"Are all wheats equally affected?" he asked with interest. "In all soils?"

"There is only one wheat. A high-yielding strain created for the revolution. In the first year it tripled our harvest. This surplus is all that keeps us from starvation now."

The old man rested his elbows on the table, pressed his palms together in a prayer. "All the fields gone to one wheat? It was a great risk. Surely this was understood."

"We needed the big harvests. The revolution is surrounded by enemies. And is still so young. . . ." I bit off the word, instantly regretting having made the revolution sound weak and insecure. At the words "so young" the man's eyes had rested on me.

"Your revolution is doomed," he said mildly. "The rose guild has survived many famines. But governments never do."

His tone was sympathetic; his words were unforgivable. My own voice swelled, grew adolescent and shrill. "The revolution is not a government. The revolution is us. Let us be absolutely honest. When you say that the revolution is doomed, you mean that the people are doomed. In another three seasons the surplus will be gone. If we cannot bring in a harvest we will begin to starve. The children will die first, their bones pushed outward through the surface of their skin. We will eat our dogs and then our cows, but we will die anyway. Unless you help us. The committee believes that you can. They say we can plant immediately, that you can make things bloom in the snow." I looked around at the lush surroundings. "They say you can reach inside the seed itself to change the shape of the stem, the color of the blossom." I leaned across the table to look directly into his red-rimmed eyes. "Is it true?"

He met my gaze. "There is truth to it. It will not help you. Hardiness is increased by hybridization; it takes generations. Those who created your wheat must have known this. You modify a few plants at a time, back-cross them, or clone them. After months of work you have a dozen plants. But you are talking of an entire crop. It is impossible."

"No," I told him. "Everyone will help. It cannot be impossible. The

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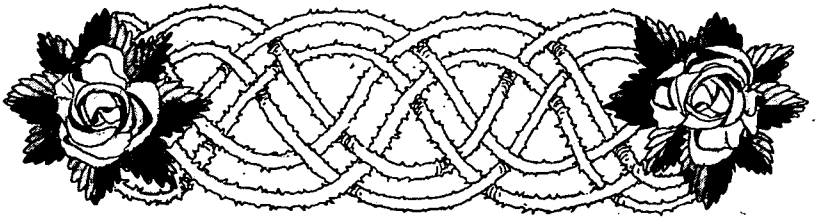

revolution is rich in people all of whom will work as though their lives were at stake." He did not respond and I allowed myself to hope I was persuading him. "I am no farmer. Those suited to this work have remained behind, have started without us. They can explain the problem better than I; they can implement the solution. We are asking for your help," I laid the rifle delicately on the table between us, "but I cannot permit your refusal." A mistake. A mistake. He put his hands over his face, the yellow sleeves slipped down to expose the bones of his wrists. He had gardeners' hands, strong, thick at the knuckles, though old and prominently veined.

His voice became sharp. "In the history of the guild," he said, and uncovered his eyes, "you are not the first to make this—request. I will go so far as to say you are not the second. We survive you, although our answer is always the same. We are the rose guild. Our duty is the roses. Your famine is someone else's duty."

"People will die." I had been prepared for this answer, still I couldn't believe I had heard it. "Are roses more important than people?"

"It's not a question I can answer. Important to whom? Important for what? We will regret the deaths very much." His voice was sincere. This sincerity was the wickedest part of all. It strengthened me for what must come next. I saw Ruben's hand moving on the stock of his rifle and I reached out to stop it. Then I stood, raised my own gun and sighted along the wand at the young woman's blue coat. She stood with her back to me, reaching into the black rose tree. I picked out a square of blue material just under the collar. I could never hit it at this distance. But who was to know that?

"Very regrettable," I agreed, "the deaths of those you do not know and need not see. But the death of someone close to you—that's something more than regrettable." I heard the old man set his cup onto the saucer. The china rattled as it came together. I told myself his hands were shaking. "I will kill her," I said quietly. "Or you will come with me."

He raised his voice to reach the young woman's ears. "Anna? My little flower?"

"Yes, grandfather."

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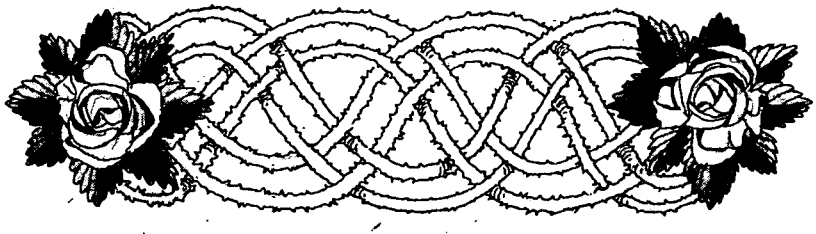

"You must prepare to die." The woman turned. The patch of blue coat swirled out of my sights, replaced by many moving colors. I looked up to her eyes, dark and startled. It would not do to look at them.

"Must I?" she said and her voice was high and trembled.

"Yes," he answered gently.

"I am not talking now," I said loudly, "to the old man whose life is nearly over. I am talking to the young woman. If you will come with us and help us, you will save many from suffering and death. If you will not, I will kill you. Is this really a hard choice to make?"

She would not look at me. Tears gathered in her eyes and rolled out; she raised her hand, but did not wipe them away. She looked only at the old man's face.

"Must I?" she asked again.

"Yes," he said.

"How will I die, grandfather?" She was so frightened. I couldn't bear to hear her voice. I could shoot her just to silence it, I thought, although I knew I couldn't. But for the revolution? For my friends? For myself?

"Quickly," the old man answered. "Bravely. We shall all follow you soon."

The long minutes passed. Ruben shifted in his seat beside me. "Go to your room, Anna," the old man said. "Leave the basket. You are not dying today, after all." Anna walked slowly to the nearest door, never moving her eyes from his, step after frightened step. The door closed behind her. My rifle had followed her progress, saw the door swing shut. I lowered it.

Now I had failed. I tried to close my mind to the consequences of my failure, searched for a thought which would make it not matter. "The revolution will send someone else. If there is no other way to solve the problem, they will have to. I failed because you didn't believe me."

"And if we had believed you," the old man's voice was cheerful, natural, "our answer would have been the same. You trusted the power of your rifle; that was your mistake. It is just to avoid this fallacy that the guild prohibits weapons. Coercion is the weakest manifestation of power. Better is persuasion. And most effective of all is that authority which creates

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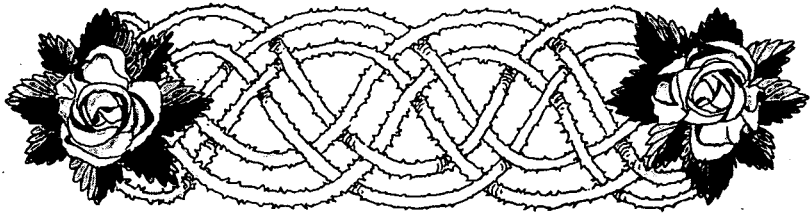

loyalty. Others in the guild may listen to you. They may even agree with you. But they will still die if I tell them to. Only I have power here."

"Then you are the one we should kill," said Ruben. He began to raise his gun. Perhaps I should let him, I thought, even as my hand moved to his shoulder, but the old man forestalled him.

"Anna has already heard my answer. The guild will die to honor it. I would be even more powerful as a dead man." He watched with satisfaction as Ruben relaxed. "You see?" he said to me. "You see the power of persuasion?"

We heard the central door opening; Angel and Silas were joining us. "Good," said the old man heartily. "Come here and be warm."

It was a poorly timed entrance. I was sick with failure already. As they came sheepishly to our table, I turned on them. "I told you to stay by the gate. Why have you disobeyed?"

"The wind was very cold," said Angel. "And Silas began to cough. It seemed to us a long time had passed and we wondered if we might be more useful elsewhere." Her dark hair was matted about her face. She pushed it back from her eyes. "Do you wish us to return to the gate?" she asked.

"I wish you had stayed," I told her angrily. "I wish I didn't have to repeat my orders." Every exchange lowered the credibility of my leadership and therefore that of the mission. I was too young. Why had I been sent? The sudden sound of a shot made my throat close over. I looked to where Ruben stood, his rifle still pointing into the garden. He pulled the trigger again. Another shot. I saw the petals of a large red rose explode. Ruben always hits what he wants to hit.

He turned to me, grinning. "It's so simple," he said. "We'll kill the roses." And I only watched him. I had ceased to be a participant in the assault at all. I only watched and wondered that, of all of us, it should be Ruben who was the killer. You'd think it would be Silas who'd grown up in oppression and poverty. Or Angel who'd been young and home when the revolution was bloody. Angel had seen her own husband hacked to pieces in the final rally of reactionary forces. Angel had killed before. But Ruben was like me—accepting the need for violence in a theoretical

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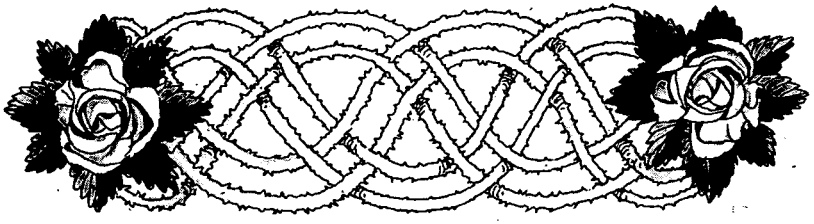

framework, but completely unfamiliar with it. To us the revolution meant plowing fields, factory shifts, vigilance against the old hierarchies. Where had Ruben learned to kill?

Ruben walked out into the garden. He raised his rifle like a club, its handle in both his hands, and brought it down on a young rose tree. Wood met wood; a branch broke. Then Anna darted from the side door. She seized the shears and held them closely against her. Other doors opened. The guild came, though no one had called them. Apparently they had all been gathered, been watching. They ran into the garden, even the children. When Ruben raised his club against the red roses, they stopped his blows with their arms, held him off with their hands. "Let me go," he told them. His voice was threatening. He shouted it. "You'd better let me go!"

The old man left the table and went to stand in front of Ruben. "Be quiet," he said and when Ruben was, he signalled for the rose guild to release him. "To kill the roses, you will have to kill us. It amounts to the same thing."

Ruben stood, holding his rifle loosely, his face angry and uncertain. He looked at me and looked away. "Kill us," the old man continued, "and the knowledge you came for dies with us. Kill us and your mission fails in the most complete way possible."

"If you will not help us," said Ruben, "we lose nothing by killing you."

"And gain nothing."

"I don't know which to choose." He really didn't. I could hear it in his voice, and I think the old man heard it too and in spite of his bravado earlier, he was shaken. His next words came slowly.

"We cannot leave the roses," he repeated. "We cannot risk them in any way. But perhaps we can help you and serve the roses at the same time." A slight breeze swept the courtyard. Petals fell and no one moved. "When we fled the revolution," the old man said, "we were forced to abandon a great deal of valuable equipment. Does your revolution have these things?"

"I don't know," I told him. "The revolution thinks that people are valuable. The revolution doesn't value machines."

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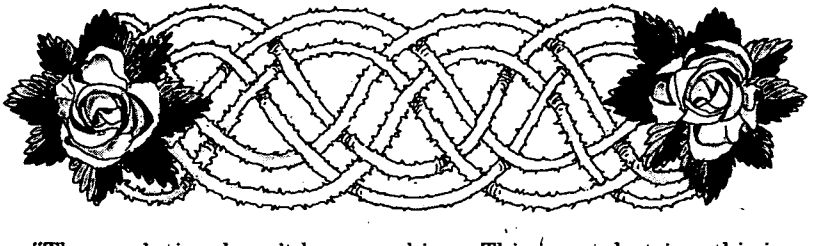

"The revolution doesn't have machines. This is not doctrine, this is a fact of life your committee must live with," said the old man. "Never mind. We might be willing to trade training for the return of our property."

"I can't promise this."

The old man looked from me to Ruben. "I am willing to gamble on your good faith," he said. "We will make one offer of help. You and he," he moved his hand, palm up, from me to Ruben, "may stay. We will show you how to change the seeds. It will take time; I cannot say how much. Nor can I promise it will help." He never moved his eyes from Ruben. Ruben was our natural leader. It was Ruben to whom he offered his bargain and he grew more persuasive. "A great gift. Unprecedented in the long history of the guild. But you must understand, the training is knowledge *and* discipline. While you are here, you submit to the laws of the rose guild. When you leave, you will not be the same person you were." It was the challenge Ruben responded to.

"All right," he said while I spoke quickly, if futilely.

"We accept," I told the old man, pretending it was up to me. And then turned to Silas and Angel. "You must go back. Tell the revolution we will return and we will have the knowledge to help."

The old man held out a gnarled hand. It took me a moment to comprehend its purpose. Then I put my rifle stock into it; it was a relief to be free of that weight. Ruben was more hesitant. "What will you do with it?" he asked.

"I will put it by the main door. The door closest to the gate. No one will touch it. Is that acceptable?"

Ruben swung the rifle upwards, aimed it at the trunk of the largest rose tree, then raised the sight abruptly. His final shot sounded its passage over the roofs of the guildhouse. "Now it's empty," he said, turning the rifle to point at himself, laying the stock in the old man's hand. Although, of course, it wasn't.

I was glad to have salvaged some measure of success to report to the committee, though I knew none of the credit was mine. And so I reject

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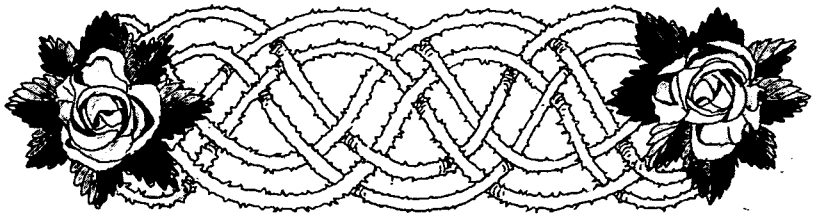

all blame for what came later. Although embarrassed by my public shortcomings, I admired Ruben for his results. And I was frightened of him. I gave no more orders and followed carefully those the rose guild gave to me. I felt an unaccustomed concern for Angel and Silas, taking the trip home, only the two of them.

We stood together in the early morning of the next day, our breath illustrating our words with white clouds. The sun had not yet appeared over the mountains. It always reached the valley late. Silas and Angel shifted on their feet before me, their backs bent under the weight of the food the guild had packed for them. I knew they would have preferred a longer rest before returning.

"They'll be fine," the old man told me as we watched their slow beginnings up the dirt-packed trail. "Mikhal has just come in from the mountain. He says the weather won't break for another two weeks yet, and if Mikhal says this, then it is so."

"Who is Mikhal?" I asked and he pointed out to me a shadowy figure in black, stooped slightly over the roses on the guildhouse roof.

"Mikhal is our wanderer," he said, then called out "Mikhal!" so that the figure straightened abruptly, waved to us, blew me a sudden kiss. The gesture surprised and embarrassed me. I lowered my eyes at once, turned again to the small backs of Silas and Angel, already almost level with the figure on the roof. I wondered what report of me they would give the committee.

It was the last time I allowed myself such a thought. Then I went inside and became, as I had promised, a guilder. It was not as difficult a transition as I might have expected. The guild proved to be as austere in its material surroundings as the revolution. In both cases this was a matter of doctrine as well as one of necessity. And the camaraderie was much the same. The guilders told stories and sang when they worked together. The more unpleasant the job, the brighter the music. They accepted me the first time I dirtied my hands. Hard, useful work made me happy.

As Ruben was not. No matter how small, no matter how reasonable the rule, Ruben made a point of disobedience. He would not work his

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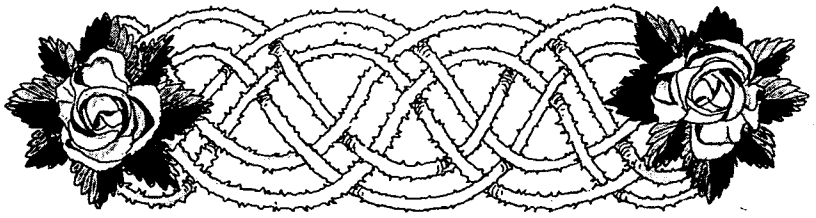

shift in the kitchen, though this is a discipline the revolution also demands. He told the guild he had not come to learn to cook, though he ate well enough and often. The guild's fruits and vegetables were undeniably larger and more flavorful than those we grew at home. He refused to tend the roses. Sent out to find and remove suckers, he severed an entire plant just above the bud union. He said it was an accident, but perhaps he shouldn't be asked to prune again? Every time we saw each other he asked me when I thought we would be taught to open the seeds.

I was enjoying the gardening. I drew a shift with Mikhal who taught me how to shape the growth and tend the grafts. Mikhal was only a few years older than I and certainly no taller. He had a long curved nose and the heavy-lidded eyes of a reptile. Do I make him sound unattractive? I did not find him so. Mikhal had returned to the guild for the winter and the gardening which is a guild discipline required for all. But his main responsibility was the wild roses. What improvements could nature make? What had nature done that was new? Mikhal went out on long expeditions to find and bring back cuttings and seeds. He held the guild's own roses somewhat in contempt, I think, for the care they required. It was the wild roses that he loved.

For three days we worked together, binding the exposed plants on the guild roofs against the winter. We pruned them back almost to the ground, wrapped the stumps in undyed cloth. Mikhal sang or told me stories of his travels. Last year he had failed to come home before the first snowfall, had been forced to share a cave with a hibernating bear. "Really," he said, against my smiling mistrust. "I crept as close to it as I dared and woke up all night long every time it *stopped* snoring." His most recent trip had been to Snake's Tongue River and along its banks he had found something extraordinary. The blossoms of the wild roses were simple, utilitarian, just as much fuss as a bee required. But these had been a deep pink in color and more strongly scented than any he had ever found before. The samples he brought back would enable the guild to transfer the new perfume to one of their own creations. We stopped work each morning to watch the sun rise. I saw Mikhal's face and hands with the clarity of morning mountain light.

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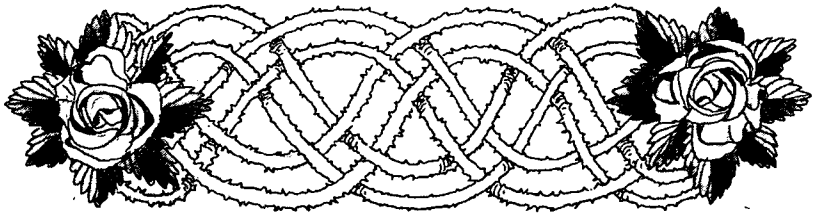

Mikhal's samples would also allow the guild to preserve the wild strain without modification. The old man told me this was the chief difference between the guild and the revolution. "The revolution," he said, "would like to sweep the past away."

"The past is a prison," I answered. "We must leave it to be free," but he shook his head.

"There are many designs in the world, many plans. When you choose one, then you are imprisoned. Then you have doomed yourself never to rise above its weakest aspect. No, freedom involves the preservation of old choices and work is the creation of new ones." He took me to the library to show me the history of the guild, or what they had been able to save of it; plated pictures of noisette roses, the pedigree of a damascus climber, an ancient account of a rose festival in which rose petals were spread so deep a few of the celebrants suffocated in them. The pedigree went back a thousand years.

I found it all rather distasteful. "Your roses are aristocrats," I said, choosing a word I knew well, but had never used before.

"The guild has survived the rise and fall of dynasties as the pedigrees show," the old man agreed proudly. "A thousand years of uninterrupted work. Until your revolution. When we fled we had to leave centuries behind us."

"So you admit that the revolution is different?"

"Oh, yes." The old man had found a watercolor of a golden rose. The palest inner petals just matched the material of his sleeves. "Tell me," he asked. "What did your revolution name its wheat?"

"The People's Wheat," I answered and was forced to smile myself at his laughter. "All right," I told him. "And what is the name of this golden wonder?" I indicated the flower in the painting.

"This is one of my own," he said. "An early work. I named it Firebird, because I had heard that the feathers of the new phoenix take on the golden color of the flame. A prophetic name, as it turned out. But all the yellow roses come originally from a single stock and its name was Peace."

My hostility towards the old man had worn away. I called him "grandfather" as everyone else did. And I refused to think of his callous politics.

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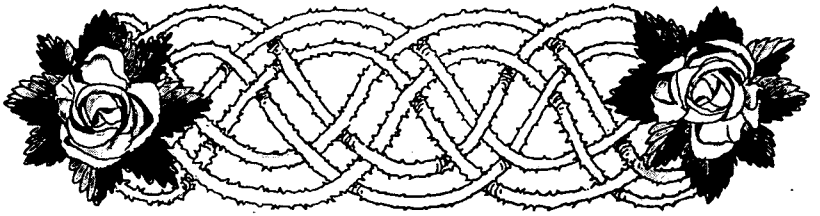

I found them impossible to forgive, so I tried to forget them. I was helped in this by his genuine interest in the People's Wheat.

He believed the root rot was parasitical. He lectured me and Ruben on the subject, excusing the rest of the guild since the subject matter was already familiar to them. "Susceptibility," he said, "is a product of the host plant—and it's good you brought samples—the pathogen, and the soil's microbial population which is always in flux. You might be able to control the disease through soil preparation. This would certainly be simplest. If not, we have to resort to cytogenetic techniques. Before the revolution, I remember great successes with these, particularly in wheats where whole chromosomes can be transferred from one variety to another. Much depends on the characteristics of the old strains, those which have survived, and I think you'll find that many have. The past is not so easy to obliterate." He consulted a list of tables, located the genes which controlled the relevant expression of resistance. "I see two possibilities," he continued. "Gene splicing, of course. Or we could use a virus vector to transfer the genes." He closed his eyes, the lids were paper thin, the lashes almost invisible. We sat for a long and silent moment. Then he looked at Ruben with a smile, turned to include me. "Wheats are not my specialty," he said apologetically. "I suppose I had better instruct you in both techniques."

Ruben had a flair for the work, the same sense of physical competence which made him such an excellent shot, and a deeper understanding than I was able to achieve. I ground the plant cells, used the solvents I was instructed to use, operated the centrifuge, separated fragments of rose DNA by electrophoresis. But I was never able to assemble the pieces of the process into one purposeful image. I told myself it didn't matter. I didn't need to understand the work. I was just a technician. All I needed was to be able to reproduce the procedures. Perhaps I was too awed by the unexpected world of machines, their dull exteriors, their amazing abilities. Like the work, I could learn to use them. But I could never see into them, never penetrate their secrets.

Ruben was less impressed. "You have a great gift," said the old man. "And a greater arrogance. You must work in the garden. Learn the

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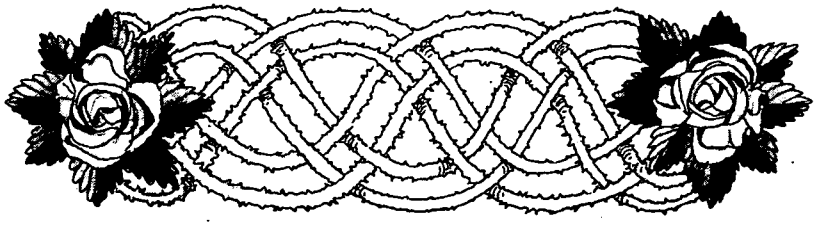

patience of the seasons. Compare your own small powers to the wisdom of nature."

"Yes, grandfather." Ruben did not pretend to hide the sarcasm.

"You are an instrument. Merely an instrument." The old man raised his voice until it cracked, tangled his fingers helplessly in his beard. "*You do not grow the roses.* You tend them. Do you see the difference?"

"I do neither," Ruben reminded him. "I will do neither. Until we need roses." He met the old man's eyes squarely and finally it was the old man who looked away. Ruben was completely isolated within the guild. He refused to dress in the loose, brightly colored clothing of the guilders. This was of no consequence. But there were also rumors that Ruben had made demands of Anna, and the reluctance of everyone to discuss it further told me what the nature of those demands had been.

By contrast, and perhaps for Ruben's benefit, the guild was open and friendly towards me. When the old man told me I had been selected to arrange cut flowers inside the guildhouse, I understood the honor that was done me. Though the guilders themselves usually used the cut flowers with restraint and seldom mixed colors, I was unable to resist, abandoned taste for gaiety, and spread large multi-colored bouquets throughout the rooms.

"Very beautiful," Mikhal told me and his voice turned my breath hot within my throat.

The next night the first snow fell and I awoke to a muffled world. Outside I worked to raise the temperatures in the gardens; the snow melted and watered the plants. Inside, I lowered the temperatures on the viruses in the lab. Ruben and the old man were arguing again, the wheat seed samples I had brought sprinkled before them on the black table-top. I picked one up, rolling it between my fingertips. How withered and dry it was. No new life resided here. Whatever codes were locked inside this wrinkled shell were codes for death. I thought with a sudden, searing certainty that what the old man was teaching us would not be enough to save us.

Ruben was agreeing. "You must teach us to open the seeds," he said. "We don't have time for back-crossing. We can't wait for generations."

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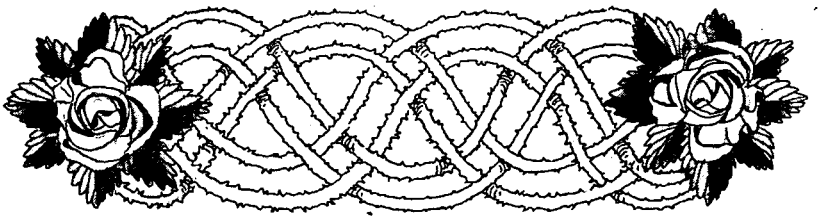

"I'm sorry," said the old man. "I have shown you what we do. I warned you it might not help."

Ruben's voice was beginning to change. He had developed a habit, due to its unreliability, of speaking quite softly when he was angry. He split through a seed hull with his fingernails. "You must teach us how to reach into the seeds."

"I cannot," said the old man. "We use those words only figuratively. Such work would involve surgery on the molecular level. This is impossible."

Ruben's voice sank again. "You're lying!" He swept a furious arm over the tabletop, many of the scattered seeds hit the old man's face like a small storm. He did not put up his hands. Ruben turned to me. "Didn't he promise us?" he said. "In the very beginning? Didn't he say he would teach us to open the seeds?"

I shook my head at Ruben. I sorted through my memories and could find no such promise. And yet, I felt, from inside a growing sense of futility and betrayal, that we had certainly been allowed to believe this. Ruben had voiced this expectation often enough. No one had bothered to tell him before now that this was merely a figure of speech.

Ruben saw none of my thoughts, only my head moving from side to side. "You are such a fool," he said. He spat the words at me, then left the lab with an unsuccessful attempt to slam the door. We felt the wind of this attempt; it moved the seeds on the table, on the floor, caught in the old man's sleeves. But the door stopped itself abruptly. Swung shut with a quiet click. The old man sank into a silence.

"Can you open the seeds?" I asked him.

He did not answer.

"Have you truly taught us all you can do?"

He raised his face to mine. "You have been here a few weeks. I have worked in the lab all my life. Of course I have not taught you all I can do. But I have taught you all I can teach you."

"It's not enough."

"I told you it would not be." He began to brush at his beard with his gnarled fingers, scattering wheat seeds onto the floor. He shook out his

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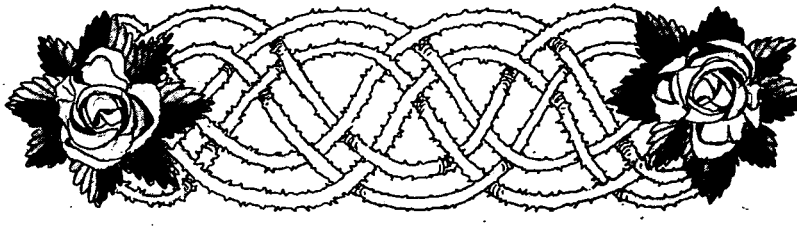

clothing, looked again at my face and softened. "Patience," he said. "In good faith I have taught you what I believed would be most useful. There may still be a famine. There may be starvation. But in time your work will bring relief. Whether the revolution survives to this point or not depends on your revolution."

"I should go home at once," I said.

"In the snow?"

"Yes."

"Come here," said the old man. "Sit down." I sat in the chair vacated by Ruben. I could still feel the heat of his body inside the cushions. The old man drummed his fingers along the table-top. They met their own images in the shiny surface, fused at the ends, then separated. "The lab is for the young," the old man said quietly. "The older I get, the more comfortable I find the library. What has been is just as incredible as what will be." His hands slackened, the yellow sleeves fell over them, obliterated them. We were silent.

I was not angry. I have no gift for anger. A brief flare, but I cannot sustain it. "I will leave tomorrow," I said.

"Yes. Mikhal is ready to go out again. He will take you over Sleeping Man Mountain. You must arrange a meeting in the spring. Then you can tell us if the revolution will return our equipment to us or not."

"And Ruben?" I asked.

"Ruben must stay with us. We have contributed to his training: now he becomes our responsibility. Ruben is why we have never trained outsiders before—we cannot trust him to use his knowledge judiciously. He has refused the disciplines. But perhaps if we keep him longer . . ."

"Will Ruben be told he is a prisoner of the rose guild?"

The old man reached across to my hands, wove my fingers into his own. "Do not tell him you are leaving. It is the last restriction the rose guild will place upon you. I will tell him you are returning in the spring. I do not think he will attempt to leave. Not alone and over the snow."

Did I make a mistake? I was sixteen and offered the prospect of a mountain journey alone with Mikhal. I agreed to secrecy. But I was truly convinced of its necessity. I was frightened of Ruben, frightened of what

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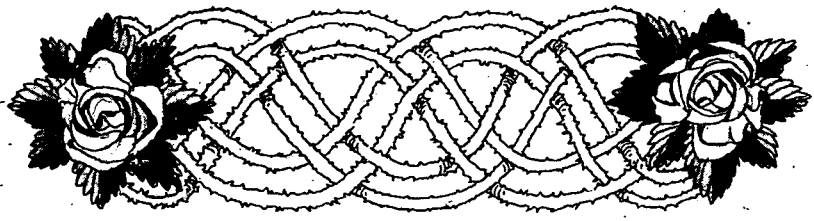

he could do to the revolution. Ruben, I thought, was a child completely out of control. If the rose guild were willing to keep him, wouldn't he be relatively harmless there?

"Ruben is the seed," the old man said, "of your revolution. Think what those seeds will bring in another generation."

But I told him he was wrong. Ruben was an aberration, a sport. I knew no one else at home like Ruben. So I left Ruben behind for further modification and walked the silent, wintry trails and thought only of Mikhal. Mikhal showed me how to find the faint paths of deer, how to walk the pebbled sides of rock without sliding, how to pick the surface of the snow most likely to hold your weight. Mikhal plucked a digitated leaf for me, held it in the icy stream until it turned to silver. Mikhal had names and stories for the stars. Mikhal said he loved me.

We lay together in the sleeping bag. "Over that mountain," said Mikhal, pointing out a blue curved horizon in the distance, "are fields I have never walked to the end of. And horses. Herds of wild horses. The dust from their hooves is as thick as fog." He kissed me. "You cannot imagine how beautiful they are." He kissed me again, more slowly.

"Come home with me," I offered. "You are too young to be blamed for the guild's decision to flee. You would be welcomed."

Mikhal rested his ear on his palm, his elbow bent beneath it. "Are there roses there?" he asked. "Are there wild roses? And what has happened to the roses around the old guild?"

"The guild is a hospital now." I tried to picture the grounds, but could remember no roses. In fact, when I thought of home I could remember no flowers at all. Mikhal refused to come to such a place. We said goodbye at the river, kissing and crying in the cold air, promising to meet in the spring. Mikhal's refusal to join me made him an enemy of the revolution, yet I could understand it. We all have our homes; it is not easy to trade one for another.

My return to *my* home was not what I had expected. The crisis was over; the assault on the rose guild was of no interest to anyone. I was grateful to be spared the necessity of detailing my many failures, but disappointed to find my efforts trivialized. The old strains of wheat had

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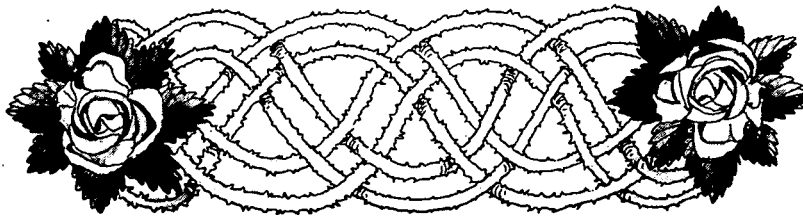

been recovered after all. Harvests would be minimal, but the people were used to making sacrifices. We would survive. We had not needed roses.

No one missed Ruben. Not until I told the committee I thought I could perfect the People's Wheat by substituting a chromosome line from something more vigorous, did they show their first interest. They provided a lab. My assistants were all old men; before the revolution they had been agriculturalists and phytochemists. Like the old strains of wheat these things had never really been lost, after all. So I asked about the equipment. "What happened," I said "to the laboratory implements in the old rose guild? I could use them now." And they were provided too, many familiar to me and a few like nothing I had seen. So I knew these strange machines were the ones the old man wanted.

By our second day of work my assistants knew more of what I taught them than I did. I was merely an excuse to bring them together, a political leader, but hardly a scientific one. I asked one of them if he thought it would ever be possible to perform surgery inside the seeds themselves. He responded with surprise. "I'm sure the guild already does this. Did they deny it?"

"They did."

He isolated an unfamiliar utensil for me. "A mass spectroscope," he said. "It provides information about the molecular structure. The rose guild was using these decades before the revolution. Who knows what they're capable of now."

A growing season later we had five plants, vigorous, hardy, abundant. I named the new strain the Old Man's Wheat and no one who saw my assistants or the plants themselves, bearding in the sun, questioned its appropriateness. "A great success," the committee congratulated me, but I had learned to be more cautious.

Shortly before I was due to meet Mikhal I dreamt I was back in the guild library. The old man stood over me, draped all in black, holding out a rose. "Look," he said. "My newest creation."

It was like the rose in the painting, but larger, brighter. Then, as I watched, the colors began to move in the petals, flickered and glowed like candles. The light from the flower shone over the old man's face which was smooth and yellow like the moon. "What is its name?" I asked.

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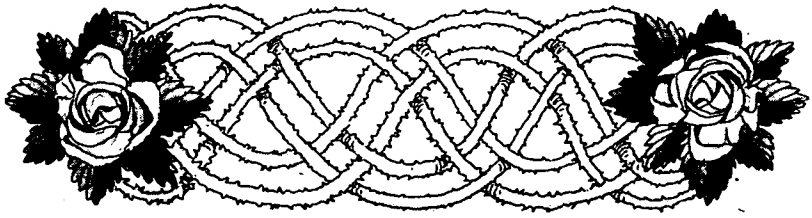

"Death," he said. He held it out to me. "Take it," he told me. "And don't be sad. All the yellow roses come from one strain and its name is Peace."

The flower was so beautiful it frightened me. I opened my hand to accept it, but woke myself instead, sweating, relieved to return to the unbroken blackness of the night.

The next day I asked the committee for permission to give the smaller pieces of equipment, just those I could carry, back to the guild. "The Old Man's Wheat is their success as well as ours," I argued. "A gift they have given us."

The committee responded that the guild had been reluctant and niggardly with their training. They had given away none of their secrets. What they had shared only slightly exceeded what we already knew.

And I told the committee a lie. I said that these were the techniques of the rose guild. I said that the old man had claimed no secrets and that I had believed him.

Still the committee refused. I went to meet Mikhal as we had arranged, and I was empty-handed. The dirt along the roads was dark, soft, and ready; the river had lost its icy edges and ran full. Mikhal waited for me on the other side. He had grown a beard and his eyes were sunken into round shadows. Before I had time to be alarmed at his appearance, he had fallen into my arms.

"I wintered down-river," he told me. "And when I returned home the rose guild was dead."

I pushed him back to look at his face. I did not understand.

His hair fell forward in unclean locks. "Some of the roses. All of the people."

"How?" I asked him, wonderingly, and then a horror rose into my throat. I could hardly speak past it. "Ruben?"

Mikhal's voice grew harsh. "They had been dead for some time. Some were hard to identify." He looked away from me, reddened eyes fastened on the horizon farthest from his home. "I don't think Ruben was with them," he said. Mikhal pulled me close again, held onto me during the long moments it took me to realize what he was telling me. Perhaps I

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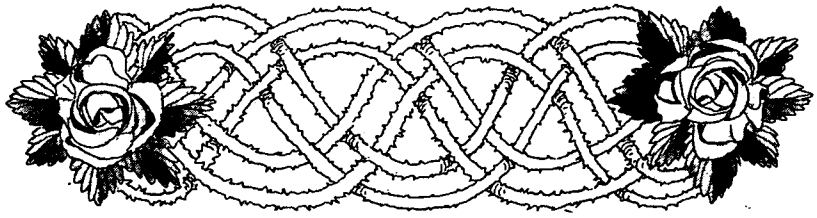

never did truly realize it. My eyes followed his gaze to the blue mountain. I had climbed a mountain once. I knew about edges and rock. Yet, at this distance, how soft it looked. My own voice spoke to me. "*Regrettable*," it said. "*The deaths of those you need not see*," and in that moment I despised myself for the way I always seemed to be protected. As a penance, I tried to imagine their deaths, tried to share in them, but all I could create was a soft picture of bodies smothered in petals, like the victims of an ancient festival, something too distant to be real.

Then Mikhal needed me and I kept him in my arms while he cried for his family, watched him sleep at last after many haunted nights. And while he slept dreamless, I walked awake through my nightmare of doors behind doors. I tried to shut them, but they opened instead on horrible suspicions. Why would the committee send an untried girl to lead a mission on which the survival of the revolution depended? How often had I asked myself that question and neglected the only conceivable answer? They would not. An untested leader would be sent on a mission of no importance at all.

It seemed to me that two paradoxical aspects of the guild had once protected them from the dynasties, the revolutions, the disruptions of history. The first was the unimportance of their knowledge. They were ignored because they dealt in trivialities. Time enough to deal with them when we needed roses.

But, as unimportant as their knowledge was, still they had a monopoly on it. What if we did need roses someday? There was only one place to get them. This monopoly was the second aspect which protected the guild. And I had broken it. I had taken the training and spread it among many people. Superficial training, of course. Restricted training, even. But had the committee believed this? I could hear myself assuring them, just yesterday, that the guild had no important secrets. "The gate is open," the committee had said when my lab work began. The committee has great faith in the ability of those, motivated by a genuine desire to help the people, to walk through an open gate.

What if my mission to the guild was never the real mission? What if I had been only Ruben's escort? I saw the deer falling into itself again.

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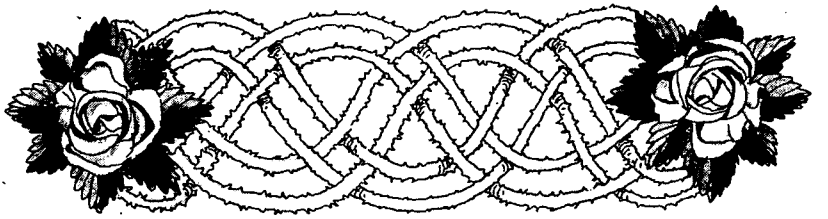

Had the committee known Ruben was a killer? Had they wished to be rid of him? Or had they created him?

I will never answer these questions, so I have stopped asking them. And I have forgiven myself. Always, I did the best that I could do. But, in the morning, I stole myself from the revolution. I went home with Mikhal and we have tried to save the guild. No one could be less suited to this work. Mikhal knows more than I and he says of all the guilders he knew the least.

Last spring we lost the last of the black vine roses. Mikhal took it very hard, but of course it is nothing, nothing compared to the human loss. The old man was wrong, after all. It is easy to obliterate the past; a bullet in the right place and the work of centuries is gone. But he was right about the power of loyalty, for it is only loyalty which holds me here. I tell Mikhal I am still a child of the revolution, and he says no, I am a hybrid now. But if anyone ever asks me to choose between a strain of roses reaching back into history and a child's food, I will not hesitate. We are all the product of the centuries. I struggle to regain the guild and the old man's work without ever believing in its importance the way he believed. And I hope the revolution prospers. With all my heart, I believe in the creation of new men and new women.

The seasons pass. I share them with Mikhal and our children and the revolution does not need me. I see Mikhal look often at the distant mountains. He is thinking of his wild roses. They are his loss and his comfort. With or without us, somewhere the roses grow. Some of them must even be yellow. ●

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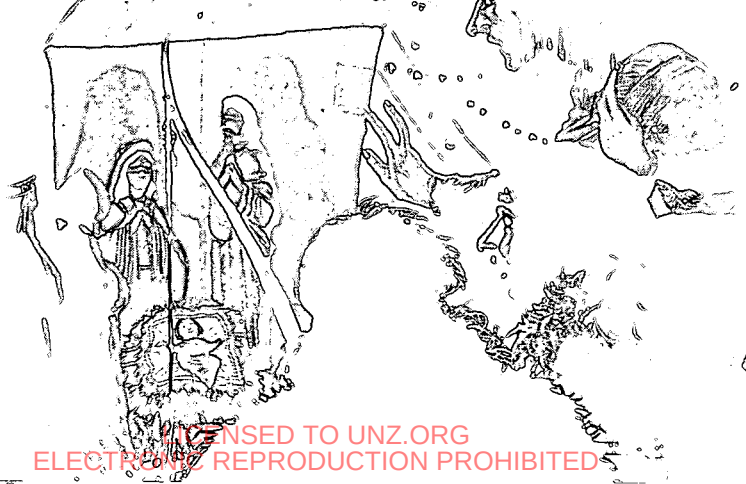
O LITTLE TOWN OF BETHLEHEM II

by Robert F. Young

art: Daniel R. Horne



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The author says: "I am retired,
but writers of course never fully retire,
they just go right on writing.
My typewriter provides me with
a sort of raison d'etre.
Many people, when they retire,
move to Florida, where they meet
people with whom they play golf.
I suppose that if a person looks hard enough,
s/he can find a raison d'etre
in a golf ball. Be that as it may,
if I ever move to Florida, I plan to take my
typewriter with me." The following story
is a harsh look at a future
on the verge of repeating history.

This morning I take Sandy and Drew into the woods to look for a Christmas tree. The woods are full of them, but finding a good one is difficult, for most of the conifers indigenous to this part of McMullen's Planet lack the natural symmetry of their counterparts on Earth.

Sandy is ten, Drew eight. Christmas Eve is tomorrow night and they can hardly wait for it to come, even though no Santa Claus will come down our chimney. When I reminded them of this, they assured me it made no difference. Christmas this year, they said, will be special enough in itself. In this they are quite right.

Usually when you go into the woods you see some of the Stoops. One of their villages is only a mile from our settlement and the women and children often dig up tubers out of the forest floor. But the woods are empty of them today. No doubt the number of colonists looking for Christmas trees scared them away.

I spot my neighbor, Jake Best. He has his three kids with him and he has just cut down a six-foot "spruce." "Merry Christmas, Glen," he calls out to me.

"Merry Christmas, Jake," I call back.

We find a conifer which is almost pyramidal and just about the right height, and I set to work with my ax. Sandy and Drew insist on carrying it home all by themselves. My wife Melissa meets us at the door. There was a rain last night and she tells us to wipe our feet good before we go in. Our house is a small, square, one-story building without any trimmings, but we are proud of it. Like all the other houses of the settlement and the two churches and the various other buildings, it is built out of plastiwood. Plastiwood, while ideal for setting up a colony in a hurry, isn't a viable building material for cold and windy regions because it's

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so thin and light, but on this part of McMullen's Planet, winter is barely distinguishable from fall and a close sister to spring, and throughout the year only breezes blow.

After supper I put up the tree in the living room and Melissa and the two kids begin trimming it with strings of popcorn and homemade ornaments. I leave them to their task and head for the square to help trim the big community tree which some of the other colonists and I put up yesterday. The square is in the center of the settlement. It is surfaced with gravel which we hauled in from a nearby creek. We couldn't, of course, bring cement with us because of its weight, and our buildings, unfortunately, lack footings. But we've begun making our own cement, and since it's too late to pour footings, we plan instead to cover the gravel surface of the square with a thick layer of concrete.

The tree is about fifteen feet tall. The children are excited about it and would be running all over the square if Joe Holtz, the mayor, hadn't put it off limits till tomorrow night. Before we put up the tree we affixed the aluminum-foil star, which we brought from Earth, to the peak. We also brought a big box of real ornaments and twenty packages of tinsel and two dozen sets of Christmas tree lights. The Agency for the Development of Extraterrestrial Acres (ADEA) didn't object because the extra weight was negligible.

After we finish trimming the tree, we position the figures of the crèche beside it. ADEA had set up a howl about the crèche, saying we should take something practical instead, but we had the American public on our side and, more importantly, the media. "Of what worth are we to Christianity," a leading commentator demanded, "if we deny to these stalwart colonists, who are going to be present at the first Christmas, the sacred scene which commemorates it?"

When Joe Holtz turns on the tree lights, the tree explodes into multicolored magnificence. The aluminum-foil star seems to shine with a light of its own. We rig up a canopy over the crèche to give the impression of a stable, and Rich Jefferson, the colony's electrician, installs a light under it of much softer radiance than those illuminating the square and which bathes the figures of Mary, Joseph, the shepherds, and the Christ child with a candlelight-like glow. I guess all of us are a bit awed by the effect. The baby Jesus seems to look right up at us out of His crib, ready to bestow His love upon this new world.

To add zest to the occasion we tap a keg of homemade beer. Figured in McMullen time, only a year has passed since our arrival, but a McMullen year equals almost two Earth years, so we've had more than enough time to introduce into our lives some of the daily pleasures we used to take for granted on Earth.

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As the beer warms us, a feeling of camaraderie, tinged with self-satisfaction, envelops us. Rich Jefferson puts the way we feel into words when, his black face mirroring the tree lights, he waves his ceramic cup of beer back and forth and says, "We worked hard, men. We worked together, day and night. We came to a strange world and turned it into a new home for mankind. A world so far from Earth it ain't been touched yet with the love of Jesus. We brought some of that love with us. Tomorrow night the rest of it will wash over us like a Wave from heaven." He holds up his cup. All the rest of us hold up ours. "To brotherly love!" he cries, and everyone joins him in the toast.

I leave the square before the others do. I want to get up tomorrow morning with a clear head.

I am thoughtful as I make my way homeward through the narrow streets. The warmth of the beer is still with me and so is the sense of camaraderie.

We named our little colony Bethlehem. I savor the word in my mind. I speak it aloud in the night. "Bethlehem."

Because of the forthcoming miracle, no other name would have done.

I know that in a scientific sense the miracle won't be a true one. It will simply be the result of the forces of nature. Nevertheless, in it, it is possible to find the hand of God.

At 10:16 tomorrow night Christ will be born.

He will be born on Earth, on the third of April, 33 A.D.

It is 2053 light years from Earth to McMullen's Planet. But interstellar ships travel through infraspace where light years do not count, and our journey only lasted a day, ship's time. We traveled back into the past, and although on Earth it is the year of our Lord 2086, were we able to see the planet in our skies, it would be the Earth of 33 A.D.

Early in the twenty-first century time-probes pinpointed the moment of Christ's birth. Before our departure the master computer at Space Base informed us exactly when the wings of light would bring the reality of the event to us. In setting the McMullen date, we chose the traditional rather than the actual month, but moved the day back by one, for Christmas Eve, in the minds of most Christians, has become even holier than Christmas Day.

Although our months are much longer than Earth months, the length of our days is approximately that of Earth days. And, incredibly, the month we have named December is the month when winter in this temperate zone begins!

The Advance Team, which studied the planet and chose the spot where the colony is now located, consists of men and women of diverse religions. Some of them are atheists. After they radioed their report to Earth, they

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set up their own colony well to the south of the land they had staked out for us. ADEA decided it would be sacrilegious to send any more non-Christians to a planet that was soon to know the birth of Christ, so for the main colony, equal numbers of Neo-Catholic and Neo-Protestant families were chosen.

We haven't given much thought to Easter. It's too far in our future and some of us may never live to see it. Hopefully those of us who do will be ennobled to an even greater degree when the reality of the resurrection reaches across space and touches our shores.

The next morning Rich Jefferson, Doc Rosario and I set out for the neighboring Stooptown to barter for wild turkeys. The big ship which brought the colonists here stands in a large clearing in the woods just outside the settlement. We walk through its morning shadow. Its rusted hull bespeaks the fact that it is here to stay, just as we are, and will never again see Earth.

In the strict sense of the word, McMullen turkeys aren't true turkeys, but they look enough like them to rate the name, and, when roasted, taste almost the same. Despite their ungainly bodies, they're so fleet of wing none of the colonists has as yet been able to bag one, but the Stoops, using nothing but primitive bows and arrows, bring them down with ease.

In the Stooptown we make our wishes known. By signs, of course, since we can't speak the Stoop language. The Chief, who, like all the members of his race, is bent slightly forward at the waist, summons two of his hunters. We show them the bright-colored pieces of polyester cloth we brought with us and they feel of the material with their dirty fingers and peer at it closely with their sad, brown eyes. The Advance Team classified Stoops as human beings, and despite their awkward posture, they aren't particularly unpleasant to look at, although they're a dirty white in color. Not only are all the adults stooped over, the children are too. Centuries of working in the fields turned what once was an unnatural deformity into a "natural" one.

It might be said that the colonists call the natives "Stoops" because they condemn them. Nothing could be further from the truth. We call them that because the word, logically enough, leaped into our minds the moment we saw them.

After the hunters set forth with their bows and arrows, the Chief asks us about the "Great Tree" that took root in our village and grew lights on its branches. One of the village boys, he "says," saw it from a tree which he climbed in the woods. I know he's lying, that the boy must have sneaked into the colony. This angers me, for Stoop kids are always doing this, and it angers me even more because we'd made our own kids stay home when we trimmed the tree.

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I tell him that the tree is an offering which we have made to our God so He will increase the fertility of the women of our tribe, since it would take forever to tell him by signs the real significance of the tree, besides which I'm not altogether certain what the significance is.

While awaiting the return of the hunters we go for a walk through the village. It consists of thatched grass-huts, and there are dozens of ugly little animals running around that look like dogs. Presently we come to the outskirts and look at the fields which, come spring, the Stoops will plow with their wooden plows and then seed, mostly with grain. The soil is dark and rich, and their harvests are phenomenal. Ironically, our own fields, despite their proximity, consist of a soil comprised mostly of clay, and all we've been able to grow so far with any real degree of success are tomatoes.

"Just think of what we could do," Doc Rosario says, indicating the Stoop fields with a sweeping gesture, "if we had *that* land!"

"Well, we ain't going to get it," Rich says bitterly.

And we aren't. Because the Stoops, having been classified as human beings, have human rights, and ADEA made it clear to us before we left Earth that we could plant only the land which the Advance Team had staked out for us.

I am glad when at length the hunters return. I share Rich's bitterness, as do the rest of the colonists, and it's galling to be exposed to thousands of acres of fertile land which your own countrymen have denied you. The hunters bring back three beautiful birds. We pay for them with our bright pieces of cloth and depart.

Melissa cleans and stuffs our turkey that afternoon. Pastor Rilke pays us a visit while she's still at work. He has decided, he says, to hold midnight services tonight, although it is generally the custom of Neo-Protestant churches to wait till Christmas Day. But since this Christmas Eve will be the first Christmas Eve, he is of the opinion that it would be improper to wait till tomorrow. He has discussed the matter with Father Fardus, he says, and Father Fardus thinks it will be a grand idea for the members of both religions to give their thanks to God at the same time. "I know there's no need to ask you if you'll be present," Pastor Rilke concludes. "I'm merely informing you and the other members of my flock well ahead of time so that our little church will be full."

Sandy asks him if we will be able to feel the Wave of Love when it arrives. He smiles. He is a short, rotund man with a round face. "Yes, Sandy, I think we will. Those of us, that is, who are pure of heart, and I don't think for one moment that any of us are not, especially the little children, of whom He said, or rather of whom He will say, 'Suffer them to come unto me, and forbid them not; for such is the kingdom of God.' "

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After he leaves, Sandy and Drew pull the shades in the living room and begin reading a microfilm of "A Christmas Carol." Melissa washes and dries the pots and pans she has dirtied; then she sets about making Christmas cookies. The women's movement, which took such giant steps forward on Earth, has of necessity, here on McMullen's Planet, taken several giant steps backward. Not that the women of the colony have lost their equality—far from it. Someday on our brand new world there will be a wealth of opportunity for the members of both sexes, but at the moment our little settlement has far more in common with the one the Pilgrim Fathers founded in New England than with the ultra-modern world we left behind us, so for the time being, women must do women's work and men men's.

We have a light supper. I have but little appetite and the kids only pick at their food. Melissa leaves more on her plate than she consumes. Since our arrival on McMullen's Planet we have lived for this night. It has made the hardships we have suffered endurable. This is true for all the other colonists. None of us are "Jesus lovers." Catholics and Protestants alike, we are hard-minded, down-to-earth people. But we are true Christians nevertheless, and we are awed by the thought that tonight our Savior will be born.

Sandy helps Melissa with the dishes. Afterwards the four of us don our best clothes. Best, that is, by our own standards, but to the people of Earth, were any of them around, we would look like farmers as we set out for the square. But neither Melissa nor I would find this offensive, for farmers are what we have become.

The night sky is rich with stars and they seem to have acquired an added brightness. How marvelous it would be if we could see the Star over Bethlehem! But we won't be able to of course, since it won't be a true star, but a syzygy of Jupiter and Saturn.

But it will be in our skies even though we won't be able to see it, and its light will be one with the Wave of Love.

In the square Melissa and I and the kids join the others who are standing around the tree. Its lights have been turned on and glow warmly in the night and the star on its peak shines forth much like the one the Magi will see from the east, even though the light from the syzygy has yet to touch our world. Mary, Joseph and the shepherds gaze down with adoring eyes upon the Infant in the crib.

Pastor Rilke and Father Fardus (who is as tall and thin as Pastor Rilke is short and plump) are standing near the crèche. They join in when we begin singing carols. We fill the night with the words of what for us is the most beloved carol of all—

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"O little town of Bethlehem!
How still we see thee lie;
Above thy deep and dreamless sleep
The silent stars go by . . ."

Many of the people are visibly moved; I glimpse tears in some of the women's eyes. Tears of joy and love.

At 10:15 Father Fardus begins the countdown. Except for his voice, there isn't a sound in the square. "Six . . . five . . . four . . . three . . . two . . . one . . ." All at once a brief brightness illumines the land. Cynics would call it a distant flash of lightning, even though the sky is clear and no sound of thunder reaches our ears, but there are no cynics among us tonight.

Father Fardus and Pastor Rilke kneel. The rest of us follow suit. And so help me, I can *feel* the Wave of Love.

I love my neighbors and I know my neighbors love me. My love reaches out over the land and I feel one with the world we have come to call our own. Around me, both men and women are crying. I feel tears running down my own cheeks.

"Hallelujah!" Pastor Rilke cries. "He is here!" cries Father Fardus. "He is here, He is here, He is here!"

We get to our feet. I see then that three Stoops have come into the square. They make their way through the crowd to the tree. They halt before it, staring up at the star.

No one says a word.

Then the three Stoops go over to the crèche. They stand staring at Mary and Joseph and the shepherds. They look down into the crib. Then one of them kneels before it and places a little bundle on the ground. One of the others reaches into the crib. The silence is broken then. By Father Fardus's voice. "He's touching the Christ child with his filthy hands!"

The priest's horror spreads through the crowd. The horror becomes anger, and then fury. "Drive them away!" Pastor Rilke screams. "Drive them away!"

The gravel covering the square consists of big stones as well as small. I seize one. Men and women scramble for them. One of the Stoops shrieks as a stone glances off his shoulder. They try to make their way out of the square. But the crowd has formed a circle around them.

Pastor Rilke steps over to the crib and kicks away the little bundle as though it were a bomb. It falls apart and tubers tumble over the ground. The air is thick with stones now. The children are throwing them too. One of the Stoops has fallen down. Blood is gushing from his forehead.

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"Dirty land hogs!" Henrietta Holtz screams, but the stone she throws goes wild.

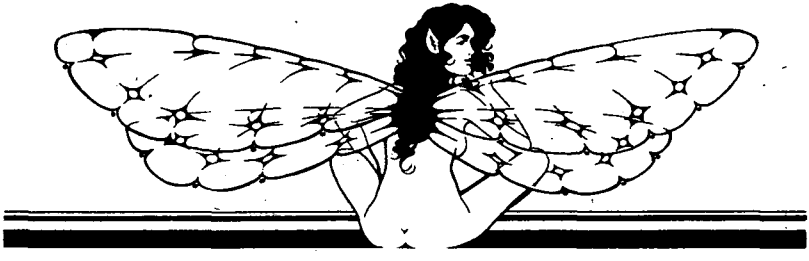
Melissa's aim is better. Her stone strikes one of the Stoops on the chest.

"Because of you stupid creeps we have to farm dead land!" Maria Rosario shouts.

"Kill the dirty land hogs!" screams Dorothy Best. "Kill them, kill them, kill them!"

Rich Jefferson picks up a great big stone and heaves it. It misses one of the Stoops by inches. The two who are still on their feet pick up the fallen one. Dragging him, they try to force their way through the crowd. Both are bleeding. The colonists in their path claw at them and strike them with their fists, but they weather the blows and at length they drag their companion off into the darkness. We let them go.

Slowly fury fades from our faces. Love takes its place. The Wave from faraway Earth is still washing over us. Rich Jefferson, who is a soul for neatness, gathers up the scattered tubers, carries them to the edge of the square and throws them into one of the drainage ditches. We begin to sing again. "Silent Night." "Hark! the Herald Angels Sing." "Good King Wenceslas." The voices of adult and child rise heavenward to the stars. Afterward we file into the two churches where Pastor Rilke and Father Fardus give thanks to God for sending us His Son. ●



NEXT ISSUE

In our Mid-December issue, we are proud to be featuring a novelette, "All this and Heaven Too," by James Tiptree Jr. Our cover story, "Storming the Cosmos," is a hilarious tale by Bruce Sterling and Rudy Rucker. We will also have fiction by Gardner Dozois and Susan Casper, Ian Watson, and others. This issue goes on sale November 19, 1985.

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MARTIN GARDNER (from page 26)

SOLUTIONS TO BULL'S-EYES AND PRATFALLS

1. Lucretius, *De Rerum Natura* (On the Nature of Things), circa 99 B.C. This accurate description of evaporation shows that ancient Greek and Roman particle theory had more empirical support than some historians of science like to admit.

2. Roger Joseph Boscovich, *Theoria Philosophiae Naturalis* (Theory of Natural Philosophy), 1758. In today's particle theory, matter is believed to be made of six kinds of leptons and six kinds of quarks, all pointlike, with no internal structure.

3. Jonathan Swift, "A Voyage to Laputa," in *Gulliver's Travels*, 1726. Mars's two moons were not discovered until 1877. Phobos, the innermost moon, revolves in a trifle more than seven hours, and Deimos, the outermost moon, in about 31 hours. That Mars had two moons had earlier been predicted by Kepler. This was probably the basis of Swift's account.

4. Samuel Johnson, in a letter to Mrs. Thrale, November 12, 1791.

5. Robert Hooke, British physicist, in *Micrographia*, 1664.

6. Benjamin Franklin, in a letter to Abbé Soulavie, September 22, 1782.

7. Erasmus Darwin, Darwin's grandfather, in *Zoonomia*, 1794.

8. Alfred Tennyson, *Locksley Hall*, 1886.

Now see if you can name the single scientist responsible for the following pratfalls:

"The talking motion picture will not supplant the regular silent motion picture . . . There is such a tremendous investment to pantomime pictures that it would be absurd to disturb it." (1913)

"It is apparent to me that the possibilities of the aeroplane, which two or three years ago was thought to hold the solution to the [flying machine] problem, have been exhausted, and that we must turn elsewhere." (1895)

"In fifteen years, more electricity will be sold for electric vehicles than for light." (1910)

"There is no plea which will justify the use of high-tension and alternating currents, whether in a scientific or a commercial sense. . . . My personal desire would be to prohibit entirely the use of alternating currents. They are unnecessary as they are dangerous." (1889)

The answer is on page 182.

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"...HOW MY HEART BREAKS WHEN I SING THIS SONG..."

by Lucius Shepard

In the past two years, Mr. Shepard's work has become well-known to our readers. He has also become a major figure in the science fiction field. Three of his stories were nominated for the 1984 Nebula award, and one of those, "A Traveler's Tale," was first published in *IAsfm.* As this book goes to press he is a finalist in two Hugo award categories and a nominee for the John W. Campbell award for best new writer.

art: Gary Freeman

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The summer I turned sixteen, rock 'n roll came back to the fishing village of Daytona Beach for the first time since the Winnowing nearly a century before. The gypsies brought it in a horse-drawn cart, shrouded beneath a plastic tarpaulin (my cousin had a peek underneath and said it was locked in a metal coffin), and they off-loaded it inside the dancehall at the end of the wooden pier that sticks out from the Boardwalk just south of the Joyland Arcade. Then the lot of them—around thirty all told, crammed into four rickety wagons—drove up and down the beach, beating hide drums and shouting about the musical marvel they were going to put on display. My wife Darcy tells me now that not enough happened that night to make a story, and in a way she's right; but it seems to me that it was at least the end of a story, an important one, and as such ought to be written down.

There wasn't a prayer that Pa would have let me go to the pier. Not that he was like the Rickerds, who claimed that relics of the old days were Satan's handiwork and praised God for having delivered us. No, Pa's objections would have been more pragmatic. Hadn't I gone to the Casadaga fair last month? What did I think, that the world was made of weekends? And didn't I have nets to mend? But I wanted to go. The previous winter a peddler had come through Daytona and had played some rock 'n roll on a dinged-up cassette recorder. Listening to it, I had felt dangerous and edgy and full of urgent desires. I'd liked that feeling. And so just after moonrise I stole from the house to meet Darcy—then my wife-to-be—at the ruin of the Maverick Motel, which stands at the junction of A1A and a nameless street that peters out into the jungle.

Drenched in the milk-and-silver light of a three-quarter moon, A1A was a spooky place, with its line of hurricane battered condos and motels stretching away like worn teeth in the jawbone of a leviathan; the humps of sand dunes glowed snowy white between them, and on the western side of the road, where once had stood shopping malls and restaurants and bungalows, now there was only a wall of palmetto scrub and palms, oaks and acacias. Darcy ran ahead of me over the tilted-up slabs of asphalt: a slim, sun-darkened girl with blond streaks in her chestnut hair, barefoot, wearing a flimsy dress that the wind plastered against her thighs. She was carrying a waterproof bag to keep our clothes in when we swam out to the pier. Every once in a while she'd stop and let me kiss her. Those kisses were playful at first, but they lasted longer and longer each time, until finally we would be locked together for two or three minutes, with land crabs scuttling around our feet like live pieces of a dirty-white skull. By the time we reached the ramp where we intended to turn down onto the beach, I was in so much pain from wanting her I could hardly walk, and I tried to convince her that it was foolish to wait another month. We loved each other, I said. Why didn't we hole

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up in one of the old motels instead of going to the pier? But she pried my hand loose from her hip and skipped off along the ramp, laughing at me.

"Goddammit, Darcy!" I shouted. "It hurts." I walked after her, exaggerating my limp.

"I heard it can be fatal," she said, smiling and darting away.

Combers were tossing up phosphorescent sprays, crunching on the shore. In the distance I could make out the spidery silhouettes of the canted Ferris wheel and the Tilt-A-Whirl rising from the darkened Boardwalk, and past them, the centipede-on-stilts shape of the pier; the lights on the dancehall at its seaward end were winking on and off, all colors, like a constellation gone haywire. That pier had been around for a couple of hundred years, surviving storms that had twisted newer piers into a spaghetti of iron girders. Ever since I'd been old enough, I'd climbed all over it, and early on I'd learned that if you could keep from being scraped against the barnacles by the surf, you could scale the pilings out near the end and sneak into the dancehall through a storeroom window with a busted latch and listen to whomever was playing: usually fiddlers and guitar players. Not having the price of admission, this was what Darcy and I had planned to do.

We had reached the beginning of the Boardwalk—stove-in arcades (except for Joyland, which was kept up and ran off the same generator as the dancehall) and fallen-down rides and wrecked miniature golf courses with Spanish bayonets sprouting from their rotted carpeting—when a shadow heaved up from the deeper shadow of the crumbling sea wall and called to us. Mason Bird. A loutish, pudgy kid, whom I didn't like one bit. His family had wanted to arrange a marriage between him and Darcy, and he had convinced himself that Darcy was marrying me against her will, doing it to please her parents and in reality pining away for him. He came shambling over, a sappy grin splitting his round face, and tried to make eye-contact with her. "If you're goin' to the show tonight," he said, "you better have a fortune in your pocket."

"We're just walkin'," I said stiffly.

"Gonna be quite a show," said Mason, his eyes glued to Darcy's chest. "This ol' gypsy girl was tellin' me 'bout it."

"Oh?" said Darcy, and I frowned at her: Mason didn't need any encouragement.

"Yeah," said Mason. "Seems they was pokin' 'round in New York City two, three years ago, and they found themselves an android. That's kinda like a man. Got blood and organs and all, but no personality. No mental stuff."

"Bullshit!" I said.

Mason acted as if he hadn't heard. "But them ol' scientists had a way of stickin' real people's memories inside its head, and they give it the

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memories of this famous musician. Fella named Roy John Harlow. Plays up a storm, I hear."

I took Darcy's arm. "So long, Mason," I said. We started walking, but he fell into step beside us.

"Reckon I'll wander along and see if there ain't some stray honey who wants to go," he said. "Me and Pa sold us a load of dried shrimp, and I got money to burn."

It occurred to me that Mason must have guessed we'd be coming down the beach and—knowing I never had any money—had staked himself out by the sea wall in hopes of persuading Darcy to ditch me. I was furious, and Darcy must have sensed it, because she squeezed my arm and gave me a look that seemed to be asking me to spare Mason's feelings. I clammed up, but it put me in a sulk; I could see how the night would go, with me and Darcy trying to slip away and Mason dogging our every move.

About a hundred feet further along, we ran into a group of people on the beach in front of the Joyland Arcade, and one of them—old man Rickerd, locks of his gray hair whipping like flames in the breeze—was shouting that we should stop the gypsies from bringing this evil into our midst. "Might as well feed your kids poison!" he said. "Know what they used to call rock 'n roll? The Devil's music!" From where I was standing, the neon word JOYLAND was spelled out in an arc above his head, adding an incongruous caption to his evangelic witnessing, and inside the arcade, dark figures were hunched over the games: it looked strange, that one brightly lit place among all the shadowy ruin. "Roy John Harlow!" sneered Rickerd. "It's got a man's name, but you can't fool a fool for Christ! That's the Devil in there, sure as I'm born!"

Some people argued against Rickerd, but the majority were in agreement. That struck me as funny, because, while most of the adults in Daytona would say that the world was better off than it had been before the Winnowing, you could tell they didn't really believe it; the stories their grandparents had told had made them long for things they'd never seen, and their attitude was in part sour grapes. As for us kids, we had too much distance from the Winnowing, and we were merely curious about the past, not haunted by it. The argument heated up, and though everybody there knew that nothing was going to come of it, judging by all the yelling and fist-shaking, you'd have sworn that a lynch mob was forming. Mason chipped in his two-cents'-worth, no doubt trying to impress Darcy with his intellect; since he was the only kid involved in the argument, he soon became its central focus and was drawn into the middle of the group. Seizing the opportunity, Darcy and I sprinted off toward the pier, holding hands and laughing at our slick escape.

* * *

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It was high tide, which was the only time you could manage the swim; when the tide was going out, there was a fierce undertow and you'd have to be an idiot to risk it. We let a wave carry us close to the pilings, grabbed a cross-piece, swung up, and before long we were crawling under the railing at the rear of the dancehall: a big two-story affair with peeling yellow paint. The music had already begun—shards of searing melody mixed in with the rush of wind and surf—and it was the music as much as my wetness that caused me to shiver. I pulled on my pants and caught a glimpse of Darcy shrugging into her dress. In the moonlight she looked like a woman of copper, and the sight of her small pointy breasts made me shiver even more. We cracked the storeroom window. Inside, the planking of the walls and floor was black and bubbled with creosote, shined to ebony by the glare of a dangling light bulb. Cobwebs spanned between a number of old packing crates, and next to the door that led to the stage was a coffinlike box of gray metal. You could hear the music fine. We clambered through the window and settled behind one of the crates, where nobody would see us. I put my arm around Darcy, and she snuggled close, enveloping me in her clean, briny scent. After that we just listened.

I wish I could say the things that music said to me, I wish I could write down the notes into words. Sometimes it sounded like metal animals having a fight (I imagined a cloud of dust with lightning jabbing out the sides), and other times it was eerie and full of spaces, with a gravelly voice floating between the guitar passages. But no matter what the mode, it maintained a grumbling bottom, and most of all it was loud. The loudness got inside you, jumped along your nerves and made you arch your back and throw back your head. Maybe Rickerd was right and it was the Devil's music, because while there were several instruments playing, it had the feel of a single fiery voice howling from a pit, the voice of a spirit, angry and despairing. Yet for all its anger and despair and loudness, it was still beautiful. Not a mental, thoughtful beauty, a beauty that's easy to recognize, but a beauty of muscle and blood and violent emotion. And I wondered if that might not be what the Devil really was: that kind of beauty misunderstood.

The crowd responded to each song with sparse applause. I pictured them ringing the stage, my friends and their parents dressed in threadbare hand-me-downs, applauding less for the music than for the diversion—a bit of glittering life caught in the dull nets of our lives—and confused by this monstrous noise and the odd creature who had produced it. Then Roy John Harlow would introduce the next song, saying once, "Here's a little tune I wrote 'bout a hunnerd 'n forty years ago," and giving a sarcastic laugh. Embodied in the laugh was the same powerful despair that moved in the music, and the longer he played, the more

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dominant that despair became. Finally, following an extended silence during which the crowd muttered and rustled, Roy John Harlow said, "I wanna do one more for you. Somethin' I finished a few days ago. It's probably gonna be the last tune I write, 'cause it says all I gotta say 'bout the way things are nowadays." The song had no music but was accompanied by echoing doubled handclaps that he inserted at the ends of lines and—now and again—in the middles. Though as with the other songs, many of the words were unfamiliar, there was no mistaking its meaning: he was evoking our common sadness, making us feel what we had tried not to for so long.

"Once I had a lady, she moved like a river and looked
like an angel in red,
And I knew a guy name of Gordon, he could always sell
you somethin' good for your head.
There used to be a joint down on the corner where you
could grab a beer or two,
And sometimes I'd catch a jet plane to Paris and go
dancin' on the Cote d'Azure . . .
Dancin' on the Cote d'Azure.

"Once there were Cadillacs . . . Cadillacs!
Once there were space shots and astronauts,
Bluejeans and silver screens,
Diamond rings and dyin' kings with computer hearts.
Once there was everything you wanted and too much to
choose,
And once I felt like fallin' in love . . .
Once I felt like fallin' in love."

Most of the song was like that: lists of names and things and places that—as I've said—were foreign to me. Looking at them now, I can't understand why they affected me so much; but at the time they seemed emblematic of something rare and alluring, and when Roy John Harlow sang the chorus, I'd feel an awful tightness in my chest and would have to lower my head and close my eyes.

"Hey, hey, baby! It feels so wrong!
Ain't no sense in keepin' on, keepin' on . . .
My head starts achin' when I think about it's all gone,
And how my heart breaks when I sing this song . . .
How my heart breaks when I sing this song."

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There was hardly any applause afterward, and it wasn't more than a second or two later that the storeroom door creaked open and footsteps scraped on the planking. Darcy and I kept dead still. We hadn't expected the performance to conclude so abruptly, and we had believed we'd have time to climb out the window.

"Don't put me back in there, man," said a gravelly voice. "Lemme sit up tonight."

"I don't know," said a deeper voice. "I got . . ."

"C'mon, man! You gotta gimme some life once in a while. Just cuff me and lemme sit."

"All right," said the deep voice. "But I'm postin' a guard out front. Don't you think 'bout goin' nowhere."

"Where am I gonna go in this goddamn world?" said Roy John Harlow.

I heard a metallic snick.

"You wanna smoke?" asked the deep voice, and Roy John Harlow said, "Yeah." Then the door banged shut.

Until that moment I'd thought of him as a man, imagining him to be similar to the run of Daytona men—burly, bearded, tanned—only dressed fancier. But now I wondered what fearsome thing might be waiting on the other side of the crate. From beyond the door came a thump, voices fading and then sheared away by a second thump, and I realized that the gypsies had closed the dancehall. Soon they'd be shutting down the generator. I didn't want to be trapped in the dark with an unknown quantity, and so—screwing up my courage—I had a peek at Roy John Harlow.

He was sitting on the gray metal box, his wrist cuffed to its handle, smoking a crookedy cigar and staring at the wall. In only one particular had my image of him been correct: he was wearing red leather trousers and a white silk shirt. His black hair had been molded into a pompadour that had more-or-less the shape of a rooster's comb, with a curl hanging down over his forehead. He was thin, and his long-jawed, hollowed face had an evil handsomeness; it was a face better suited to a sneer than a smile. Then he turned to me, stared straight at me, and I saw that instead of normal irises and pupils, the whites of his eyes were figured by two black hearts. I had the idea that—like the cherries and lemons on the windows of the slot machines in the Joyland Arcade—those hearts could be whirled away and other symbols would roll up in their place. Two spades, maybe, or two roses. He didn't seem surprised by my being there, just puffed his cigar and blew smoke. The fact that he didn't react eased my fears, and I understood how perfectly his appearance fitted his music. To my mind rock 'n roll and Roy John Harlow were one and the same. He was the personification of that spirit-voice singing out from the flames

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of hell, and I guess that's the way he perceived himself: a lost soul trapped in a world that was the ashes of a fuller, brighter place.

"What's happenin'?" he said at last.

Darcy, who hadn't yet seen him, dug her nails into my arm. I stood, feeling innocent and foolish. "Nothin'," I said.

"You got that right," said Roy John Harlow. He jetted smoke from his nostrils and held up his manacled hand. "Don't s'pose you got a key?"

The handcuffs were rusty, frail-looking, and it would have been no trouble to pick the lock with my Swiss Army knife. But I was leery about doing it. Though he had—except for the eyes—the presence of a man, I couldn't escape the notion that he was property. And, too, even if I let him loose, the gypsies would hunt him down. They were a persevering bunch when it came to holding onto something they considered theirs, and nobody with Roy John Harlow's eyes would be able to hide from them. Then they'd be after me for having helped him. "No," I said.

Darcy stood, and he gave her the onceover. "How'd you get in?" he asked. I told him about the swim, the window, and he said, "You better swim on back. They might change their minds 'bout lettin' me sit."

"Can't do nothin' 'til the tide turns." I explained about the undertow. "It'll drag you clear 'cross to Africa," I said.

"Africa," he said. "That's a helluva name for it."

I didn't understand what he meant.

"Why they keep you in that box?" asked Darcy.

He shifted his eyes toward her; the light struck full into them, and I saw that those heart-shaped pupils had narrow red borders around them, giving them the look of demonic valentines. "There's needles in the side that inject me with shit," he said. "Knock me out. They wake me up when they need me." He let out a dispirited laugh. "Parceled out like that, you could live ten thousand years in this fuckin' wasteland."

"World might be different in ten thousand years," said Darcy.

Again he laughed—it seemed that downhearted laughter was his reaction to most everything. "It'd just be worse," he said. "You shoulda seen where I come from. Machine sex, separate governments for different age groups, joykillers. That's why I let 'em do this to me. I was an old man, and I wanted to outlive that craziness. So when these guys come to me and say, 'Roy John, we wanna record you and preserve your vast experience,' it appealed to me, y'know? It was as close as I was gonna get to seein' the glorious future, and I was enough of a pervert to think these goddamn eyes were cool. Well, I got my wish, man, in a kinda shadowy way. I seen the glorious future. The world I grew up in wasn't much, but it sure as hell beat the world I was old in. And this world . . . shit!" He was silent for a bit, and I could hear the wind sighing,

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the tide sucking at the pilings below. "Tell me 'bout the Winnowing," he said finally. "No one seems to know nothin' 'bout it."

"Nobody does," I said.

"My pa told me that the earth passed through a comet's tail," said Darcy. "And most everybody just keeled over."

"Some folk'll tell you it was a kinda poison gas," I said. "And some'll tell you it was Jesus weedin' out the sinners. Government up in Atlanta's s'posed to know for sure."

"Why don't you ask 'em?" He glanced back and forth between us. "Don't you wanna know? Ain't you curious 'bout why six billion people died?"

"Government's just a buncha crazies with a computer," said Darcy. "We don't like to have much to do with 'em."

He stared at us as if we were something pitiful, and that made me defensive. "Besides," I said, "the Winnowing was terrible, it's true. But now we got clean air and water, and plenty of room. Most people think it's an improvement."

"Yeah?" he said. "Then how come I just had five hundred of those people lookin' at me like dogs at a steak?"

I shrugged, having no answer, and after a moment Darcy asked, "How'd you get all those guitars and drums goin' at once?"

"Computer programs." He stubbed out his cigar and laid it on the metal box.

"It was really great music," said Darcy. I thought he was going to say something, but he merely shook his head, amused, and leaned back against the wall. Darcy wasn't to be put off, however. "It was so strong," she said. "I never heard nothin' that strong."

"You woulda loved it, wouldn't you?" he said nastily. "Little cooze like you, shakin' her butt, dyin' to go down on some asshole like me, who could make it thunder when he plucked a string."

If anybody else had talked to her in that tone, Darcy would have responded in kind; but all she did was flush and shift closer to me.

"Rock 'n roll wasn't shit," said Roy John Harlow. "The music was okay, but music was 'bout two percent of it. Most of it was copin' with the stooges in your band, makin' sure they'd show up on time and be straight enough to play. Dealin' with brain-dead roadies and crooked promoters and crowds so stoned they couldn't unzip their flies." He laughed. "I remember one night I got to the bottom of all that."

The lights flickered and went out. For a moment the storeroom was pitch-dark, but then a red glow began to shine from Roy John Harlow's eyes. The heart-shaped borders around his pupils were blazing neon-bright, illuminating his cheekbones. It was an uncanny thing to see, and I took Darcy's hand.

"We were playin' a party in a VFW hall," said Roy John Harlow.

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"'Bout a thousand people, wasted on beer and smoke and pills. Kids splashin' in puddles of spilled beer, barfin' in the shadows. One girl was dancin' in front of me, her eyes rolled back in her head, makin' these clawin' gestures at me. Weird! We were opening for a band called Mr. Right. They thought they were hot shit, but we could kick their butt and we were doin' it that night. Halfway through our set, this bearded guy with his arm in a cast crawls up onto the stage and while I'm singin' he starts unpluggin' my mike. I push him off with my foot and keep singin', but he tries to unplug me again. I push him off again, and that's how we finish the song, with this crazy dude goin' for the plug and me kickin' at him.

"After it's over I jump down and grab him and say, 'What the hell you think you doin'?' And he says, 'Mr. Right wants to come on now,' and tries for the mike plug. I haul him back and say, 'Fuck Mr. Right!' I got the picture, you see. The dude's one of Mr. Right's roadies and they've told him to cut us off 'cause we're makin' 'em look bad. The rest of the band crowds around, and we tell the dude he better be cool or he's gonna wind up with somethin' else in a cast. But he won't listen. Later I found out they'd threatened to fire him if he didn't get rid of us. The next thing here's this fat son of a bitch waddlin' through the crowd. Mr. Right's manager. And he starts spoutin' off 'bout us bein' reasonable, compromisin'. One of my roadies leans in. His pupils are the size of train tunnels, and he's grinnin' like a maniac. 'Lemme handle him, Roy,' he says. 'Fore I can say anything, he hooks the manager in the gut and sets him down. Then all hell breaks loose. Here comes Mr. Right. Five guys wearin' glitter and swingin' mike stands and shit. A regular fuckin' Battle of the Bands. Somebody clips me on the forehead, and I go down for the count. When I wake up, it's all over and I guess we musta won 'cause my band's on stage, fillin' in with instrumentals."

Roy John Harlow closed his eyes, and the room went dark for several seconds. "After my head stops hurtin' enough so's I can stand, I head to the bathroom. There was blood on my face, and I wanted to wash it off. Inside the bathroom, it's even more of a hellhole than the hall. 'Bout an inch of piss and beer on the floor, garbage floatin' in it, and buzzin' fluorescent lights that are blindin' me. Sittin' in one of the stalls with her dress hiked up 'round her hips is this teenage girl, who's passed out. She's kinda pretty, but her mascara's run and her lipstick's smeared. Makes her look warped. I check out my head in the mirror. Nothin' serious, but blood is coverin' half my face and I'm thinkin', 'Here I've been beatin' my brains out in the business for seven goddamn years, and this is what it's come to—standin' in a bathroom, bleedin', wasted, and my audience passed out on the toilet.'

"I don't wanna go back out. I just lean against the sink and read the

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graffiti, which tells me what fun it is to be a lesbian and that Jesus sucks and how some cooze wants to lay everybody in my band. Reading it, I decide I've had it. Time for a new profession. 'Bout then, in walks two teenage boys. 'Hey!' says one. 'Terrific fight, man!' Then he notices the girl. He leans over to look at her, makes his hand into a pistol and shoots her 'tween the legs. 'Bang,' he says. The other kid starts gigglin'. 'Hey!' says the first kid. 'You wanna ball her, man?' And I tell him, 'No thanks.' He staggers over and says, 'C'mon, man! She won't mind. Big rock n' roll star like you. She won't even look at us, but she'd be fuckin' grateful to you.' I tell him to leave me the fuck alone, and he goes back over to his buddy. They hang out for a while, crackin' jokes 'bout the girl. It was weird, watchin' 'em in the mirror. Reminded me of those cartoons where Daffy Duck or somebody's got good and evil in a cloud over their head, tryin' to convince 'em what path to follow. Finally they're ready to go, and the first kid says, 'Hey, man! You guys got a really great sound.' He sticks his fist up in the air. 'Rock n' roll!' he says. 'Rock 'n roll!' "

Roy John Harlow scratched a match on the metal box and relit his cigar; the coal wasn't as bright as his eyes. "The kid was right," he said. "That goddamn bathroom . . . that was rock 'n roll."

"Why didn't you quit?" I asked.

"Two weeks later I landed a record contract. I thought maybe bein' on top would be different. But it was the same shit, only dressed up in money." He chuckled. "Maybe you're right 'bout this world bein' better off than mine. Maybe I just can't accept it." He waved his cigar at the window. "Open that up. Let's see what it's doin' outside."

I did what he wanted. A chute of moonlight spilled into the room; the surf of low tide was a seething hiss. Roy John Harlow lifted his head, as if he'd scented something new and strange. "Pretty night," he said, and then, with a touch of desperation in his voice, he added, "Jesus God! I wish I was out in it!"

Darcy nudged me; she knew about my Swiss Army knife.

"You couldn't get nowhere," I said. "Those gypsies, they can track an ant through jungle."

"He could head south," said Darcy, fixing me with a disapproving stare. "The Indians might take him in."

"He'd never make it." I wanted to let him go, but I was still afraid of what the gypsies would do.

"Where I'd go," said Roy John Harlow, "couldn't nobody track me."

"Where's that?" I asked.

"Africa."

"What do you mean?" I asked.

He studied me, and I had trouble meeting his eyes. "You know how

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to get me outta here, don't you?" he said; he yanked at the handcuff. "Damn it! Help me!"

I couldn't say anything.

"You know what it's like for me?" he said. "I feel *wrong*. Outta place. I'm not even sure what the fuck I am, but I'm sure I'm not Roy John Harlow. His ghost, maybe, or his shadow. That makes me crazy, sick at heart. I spend most of my time in this box"—he rapped it—"and once in a while those bastards wake me, stand me up in front of a buncha raggedy fuckers so I can play 'em a blast from the past. That makes me even sicker, seein' how puny and screwed-up everything's gotten. It's been like that for three years. Livin' on stage, and dyin' after each show." His voice dropped to an urgent whisper. "I don't want it anymore, man! You gotta way to turn me loose, do it!"

"Let him go," said Darcy.

I looked at her, alarmed. "Darcy!" I said. "I think he's gonna kill himself."

Her face grave, she was watching Roy John Harlow, who was half-illuminated by the moonlight, appearing part shadow, part real. "Let him go," she repeated. "It's his right."

"Maybe so," I said angrily. "But his right don't include my havin' to help him." That, I realized, was bothering me as much as my fear of the gypsies. The thought of helping someone die, even someone not quite alive or alive in a peculiar way, didn't sit well with me.

"You think this ain't death?" Roy John Harlow kicked the box. "And this?" He gave the handcuff a savage jerk. "And these"—he pointed to his eyes—"you think that's life? C'mon, man! Lemme loose."

How he said that last part reminded me of him asking the gypsy to let him sit instead of returning to the box. I was doing the same as the gypsy, acting like the landlord of his soul . . . if he had one. And at the moment I couldn't believe that he didn't. "All right," I said, and kneeled beside him. I held his wrist to keep it steady while I worked on the lock. His flesh was warm, his pulse strong . . . so warm and strong that I was repelled again by the idea of his killing himself, and I stopped.

"Please," said Darcy, touching my shoulder. "It's like with Tony. Remember?"

Tony had been her pet cat, and after some kids had tortured it, leaving it half-crushed and spitting blood, I'd put it out of its misery. I wasn't sure that Roy John Harlow was a sick critter who needed death, but Darcy had a sensitivity to people that I didn't and I bowed to her judgment. I went back to work, and before long the cuff sprang open.

The glowing valentines of Roy John Harlow's eyes seemed brighter, as if registering an intensified emotion. He rubbed his wrist where the cuff had bitten into it. Then he got to his feet, boosted himself onto the

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window ledge and sat with one leg in, one out. Then he eased the other leg out and walked away. We climbed through the window after him. He was leaning on the railing, gazing toward Africa. Clouds were fraying across the moon, and the sea had a dull shine all over, like a plain of polished jet.

"I thought it'd be easier," he said.

"Maybe Darcy's right 'bout the Indians," I said. "We could . . ."

He cut me off. "Make it easy for me," he said to Darcy. "C'mere a minute."

She looked beautiful, walking toward him, with her long hair tangling in the breeze, the fine bones of her face sharp under the moonlight, and I felt a pang of jealousy. But though I knew scarcely anything in those days, I understood that whatever was to happen between them was a compassionate formality, that it existed in a separate context from what was between her and me, and I held myself in check. They stood close together. He ran a finger along the curve of her cheek, lifted a strand of her hair. "Jesus," he said. "Back when I was in style, they didn't make 'em like you anymore." He nuzzled her cheek, kissed it, then kissed her mouth. She started to put her arms around him, but he pushed her gently away. "Not too much," he said. "Too much and I'll wanna do more than remember." He sat down on the edge of the pier, grasping the lowest rung of the railing, dangling his legs off the side. Darcy moved away from him and took a stand beside me. He remained motionless for a long time, so long that I thought he must have changed his mind. I could feel my heart slugging in my chest, tension crawling along my nerves, and I wanted to run over and haul him back. At last he turned to us, his face pale and set, and I wondered what he was seeing: was it life, the good things that even the most meagre of lives can hold, or was it just two ragged kids with the dark ruin of the Boardwalk and a darker world behind? Then, so quickly that it was hard to believe he'd ever been there, he slipped beneath the railing and was gone.

Though in the years to come I was to think of his suicide as simply that—a man drowning himself, a sorrowful occurrence but nothing momentous—at the time he seemed a fabulous presence, and I half-expected a sign of his passing to appear in the sky or some great moan to be dredged up from the sea. But there was only the wind and the surf as always, and neither Darcy nor I went to the edge to see if he had surfaced. We sat in the lee of the dancehall, sheltering from the wind, which had suddenly picked up. We didn't talk much, just things like "You warm enough?" and such. The longer I sat, the worse I felt. Roy John Harlow had wanted death, had acted of his own will, but who was to say he had known what was best, and hadn't I—by helping him—exerted as much influence as I might have if I had refused? The ripples of his death spread

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through my thoughts, magnifying them, until the event took on a complexity and importance that wouldn't fit inside my head, and I was left numb and hollow-feeling. Soon the sky began to pink, crimson streaks fanned across the horizon, and the tide turned. We climbed down the pilings and jumped into the cold water; we caught a comber and body-surfed toward shore, barreling straight for the facade of the Joyland Arcade, with its sun-bleached image of a goofy clown melting up from the gray light. I scraped my knee on the coquina-shell bottom and was almost grateful for the pain.

We stood on the beach, dazed, not knowing what to do next. Going home didn't make any sense after the night we'd had. Darcy fingered the zipper of the waterproof bag; she pulled it open, then she dropped the bag and started to cry. I hugged her, trying to give her comfort; but the comforting soon evolved into a kiss, and I was cupping her breast, and she was grinding her hips against me. Pa had told me not to hope for too much my first time with Darcy, that our nervousness and inexperience might make it more problematic than pleasurable; but our need for each other was so powerful that our anxieties were washed away, and it was perfect between us. And afterward, lying with my arms around her, our bodies crusted with sand, I felt that I had gotten clear of whatever wrongness there had been, that our lovemaking had been a spell worked contrary to the intricate sadness of the night. I was entranced by the sight of Darcy's body, which—though I'd seen it often—had acquired a heightened gloss, a freshly matured beauty.

Sunrise flamed higher, a towering city of clouds pierced by sharply defined rays and mounted against a banded backdrop of mauve and crimson and gold. It was such a vivid, burning sky, it didn't seem that anything as old and ordinary as day would follow, that those colors would only deepen and grow richer, and for a moment I think I believed that the day would *not* follow, that with the death of Roy John Harlow and his music, something had been freed, some last smoke of the gone world faded, some change come full, and what passed for day would from now on and forever be something else, something new and green and hopeful, with its own music to suit. Maybe I was wrong, but it didn't matter. I turned again to Darcy, and—as the sun began to warm my back and seagulls mewed, wheeling above the ancient pier and the dancehall, looking dilapidated in that brimstone light—I moved with her in a sweet hectic celebration of what we had lost, and what we loved, and what we did not understand. ●

For Joe and Gay Haldeman

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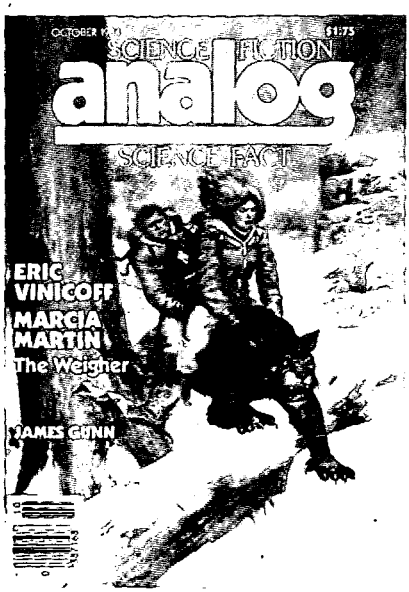

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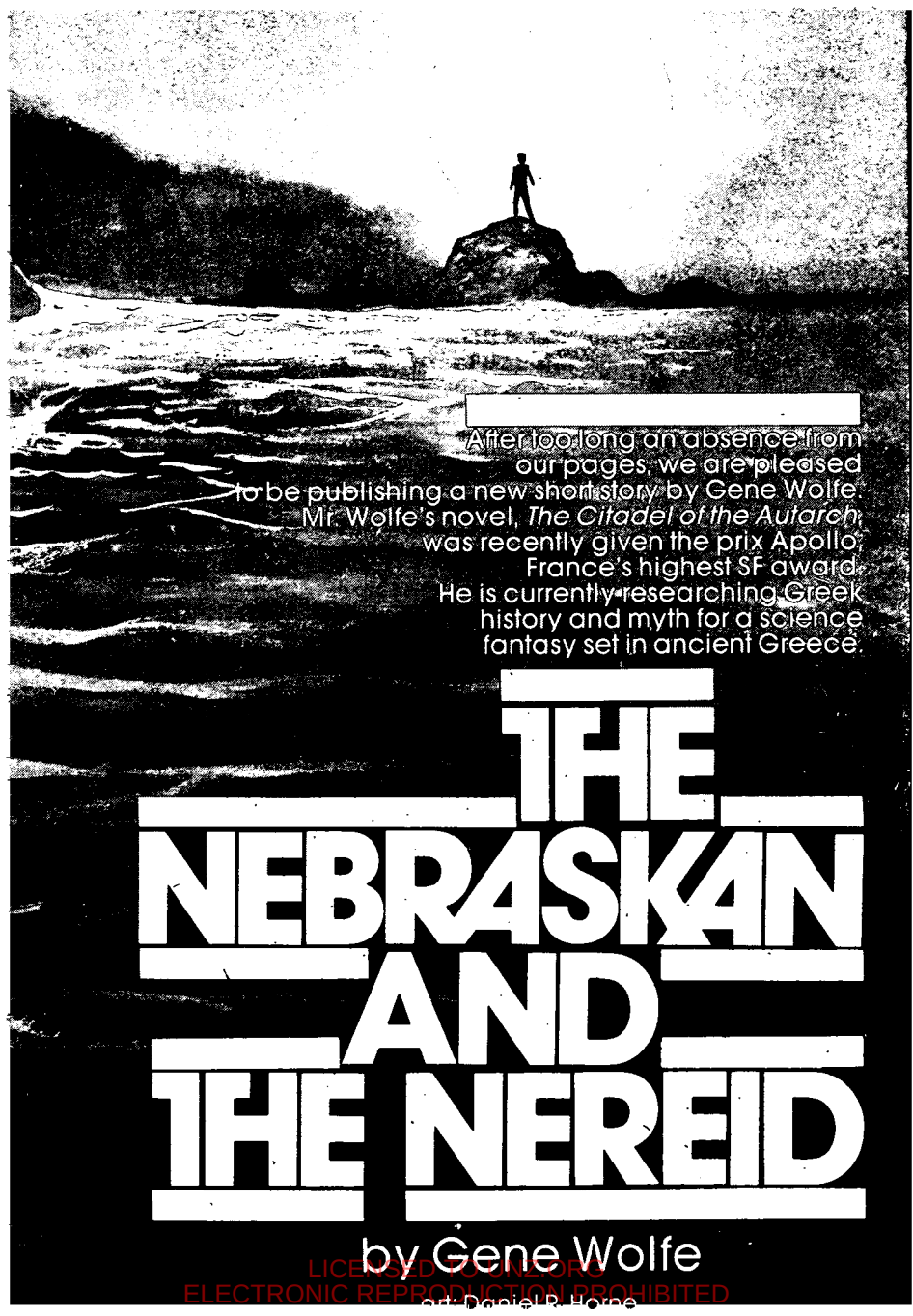

After too long an absence from our pages, we are pleased to be publishing a new short story by Gene Wolfe. Mr. Wolfe's novel, *The Citadel of the Autarch*, was recently given the prix Apollo, France's highest SF award. He is currently researching Greek history and myth for a science fantasy set in ancient Greece.

THE NEBRASKAN AND THE NEREID

by Gene Wolfe

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art: Daniel R. Horne

The Nebraskan was walking near the sea when he saw her. Two dark eyes, a rounded shoulder with a hint of breast, and a flash of thigh; then she was gone. A moment later he heard a faint splash—or perhaps it was only the fabled seventh wave, the wave that is stronger than the rest, breaking on the rocks.

Almost running, he strode to the edge of the little bluff and looked east across the sea. The blue waters of the *Saronikos Kolpos* showed whitecaps, but nothing else.

"Then felt I like some watcher of the skies," he muttered to himself, "When a new planet swims into his ken; or like stout Cortez, when with eagle eyes, he stared at the Pacific—and all his men . . ." He groped for a moment for the final two lines, as he studied the bluff. "Looked at each other with a wild surmise—silent, upon a peak in Darien."

"Stout Cortez" chuckled as he clambered down the bluff with his tape recorder bumping his side. He was no rock climber, but the slope was neither high enough nor sheer enough to require one. He imagined himself describing his adventure in the faculty lounge. *It was nothing.*

Nothing too was the evidence he found on the beach, in some places hardly wider than a footpath, that wound along the base of the bluff. There were a few seashells and a rusty tin that had once held British cigarettes, but that was all. No cast off bikini, no abandoned beach towel, no footprints, nothing.

He looked up to see a tall and rather angular woman with a canteen at her hip walking silently toward him along the strip of damp sand. He greeted her in his halting Greek, and she extended her right hand in a regal gesture, saying in English, "And a good morning to you, Doctor. I am Dr. Thoe Papamarkos. I am of the University of Athens. You are Dr. Cooper, and you are of an American university, but they do not know to tell me which."

"The University of Nebraska at Lincoln. Pleased to meet you, Dr. Papamarkos." The Nebraskan was Lincolnesque himself, tall and pleasantly ugly.

"And you are a folklorist. You must be, from what they report of you, that you walk about all day, ask questions of old people, make recordings of their stories."

"That's right," he said. "And you?"

She laughed softly. "Oh, no. I am not the competition, as you fear."

"Good!" He smiled.

She touched the third button of her khaki shirt. "An archaeologist, I am. Do you know of Saros?"

He shook his head. "I know this is the Saronic Gulf," he said, "and I suppose it must be named after something. Is it an island?"

"No. It was a city, a city so long ago that even in the time of Socrates

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there was nothing left but ruins and a temple for Poseidon. Think on it, please, Doctor. You and I, we think of that time, the Age of Pericles, as ruins. But to them, to Pericles and Plato, Themistocles and Aristeides the Just, Saros was ancient, Saros was archaeology. Now I dig, with three men from the village to work for me. About five kilometers that way. There I hear of you, stories of the folklorist, and I think we should know of each other, probably we are the only truly educated people on this part of the coast, perhaps someday we may even help each other. No?"

"Yes," he said. "Certainly." He discovered that he liked her. She was an old-maid schoolteacher, no doubt about it, with her graying hair tightly knotted in a bun. She could be Miss Twiddle from "The Katzenjammer Kids" or the Miss Minerva of *Miss Minerva and William Green Hill*. And yet—

"And you," she said. "Folklore is so interesting. What is it that you do?"

He cleared his throat as he tried to think of some way to explain. "I'm trying to trace the history of the Nereids."

"Truly?" She looked at him sidelong. "You believe they were real?"

"No, no." He shook his head. "But do you know about them, Dr. Papamarkos? Do you know who they were?"

"I, who search for the temple of Poseidon? Of course. They were the ladies, the maids in waiting at his court, under the Aegean. He was one of the oldest of all the old Greek gods. They were old too, very old, the Greek—what do you call them in English? Mermaids? Sea fairies? Tell me." She hesitated, as though embarrassed. "I understand your English much better than I speak it, you must believe me. I was three years, studying at Princeton." She unhooked the canteen from her belt and unscrewed the top.

He nodded. "I'm the same way with Greek. I understand it well enough; I couldn't do what I do if I didn't. But sometimes I can't think of the right word, or remember how it should be pronounced."

"You do not want a drink of my water, I hope. This is so very warm now, but I have a nose disease. Is that what you call it? I must take my medicine to breathe, and my medicine makes me thirsty. Do you wish for some?"

"No thanks," he said. "I'm fine."

"And did I say it correctly? Mermaids?"

"Yes, mermaids. Specifically, they were a class of nymphs, the sea nymphs, the fifty daughters of Nereus. There were mountain nymphs too, the Oreads; and there were Dryads and Meliae in the trees, Epipotamides in the rivers, and so forth. And old people, rural people particularly . . ."

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She laughed again. "Still credit such things. I know, Doctor, and I am not embarrassed for my country. You have these too, but with you it is the flying saucers, the little green men. Why should not my Greece have its little green women?"

"But the fascinating part," he said, warming to his subject, "is that they've forgotten all the names except one. Modern Greeks no longer talk about nymphs, or Oreads, Dryads, or Naiades. Only of Nereids, whether they're supposed to have been seen in springs, or caves, or wherever. I'm trying to find out just how that happened."

She smiled. "Have you thought, perhaps only they still live?"

When the Nebraskan got back to his tiny inn in Nemos, he stopped its dumpy little maid of all work and mustered his uncertain Greek to ask her about Dr. Papamarkos.

"She does not live here," the maid informed him, staring at the toes of his boots. "Over there. She has a tent." She ducked through a doorway and vanished; it was not until some time afterwards that it occurred to him that the Greek word for a tent also meant stage scenery.

On the stairs, he wondered again if it might be possible. Dr. Papamarkos taking off her heavy belt, the soldierish pants and shirt. Flitting naked through the woods. He chuckled.

No. The woman he had seen—and he *had* seen a woman, he told himself—had been younger, smaller, and—um—rounder. He suddenly recalled that Schliemann, the discoverer of Troy, had married a Greek girl of nineteen at the age of forty-seven. He himself was still years short of that.

The thought returned to him the next time he saw her. It was at almost the same spot. (He had been frequenting that spot too much, as he kept telling himself.) He heard a noise and turned, but not quickly enough. The faint splash came again. Once more he hurried, actually running this time, to the edge of the little bluff; and this time he was rewarded. A laughing face bobbed in the waves fifty yards out, a face circled by dark and floating hair. An arm rose from the sea, waved once, and was gone.

He waited five minutes, occasionally glancing at his watch. Ten. The face did not reappear, and at last he scrambled down the bluff to stand upon the beach, staring out to sea.

"Doctor! Doctor!"

He looked around. "Hello, Dr. Papamarkos. What a pleasure to meet you again." She was coming from the other direction this time, the direction of Nemos and his inn, and she was waving something above her head. It really was a pleasure, he realized. A sympathetic ear, an older woman, no doubt with a certain amount of experience, who knew the country . . . "Good to see you!"

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"And to see you, my friend. Oh, Doctor, my friend, look! Just look and see what we have found under the water."

She held it out to him, and after a moment he saw it was a glazed cup, still somewhat encrusted with marine growths.

"And it is to you that I owe, oh, everything!"

The background was red, the man's head black, his curling beard and wide, fierce eye traced in a lighter color that might originally have been white. A fish, small and crude, swam before his face.

"And on the back! See, beside the trident, the two straight scratches, the bar at the top? It is our letter π, for Poseidon. They have finer cups, oh, yes, much finer, at the museum in Athens. But this is so old! This is Mycenaean, early Mycenaean, from when we were yet copying, and badly, things from Crete."

The Nebraskan was still staring at the bearded face. It was crude, hardly more than a cartoon; and yet it burned with a deft energy, so that he felt the bearded sea god watched him, and might at any instant roar with laughter and slap him on the back. "It's wonderful," he said.

It was as though she could read his thoughts. "He was the sea god," she said. "Sailors prayed to him, and captains. Also to Nereus, the old sea-man who knew the future. Now it is to Saint Peter and Saint Mark. But it is not so different, perhaps. The fish, the beard, they are still there."

"You say you found this because of me, Dr. Papamarkos?"

"Yes! I meet with you, and we talk of the Nereids, remember? Then I walk back to my dig." She opened her canteen and took a healthy swallow. "And I kept thinking of them, girls frisking in the waves, I could almost see them. I say, 'What are you trying to tell me? Come, I am a woman like you, speak out.'

"And they wave, come, Thoe, come! Then I think, yes, Saros was a seaport, so long ago. But was the coast the same? What if the sea is higher now, what if the place where I dig was a kilometer inland then? They called it a city, a *polis*. But to us it would be only a little town—the theater open to the sky, the temple, the *agora* where one went to buy fish and wine, and a few hundred houses."

She paused, gasping for breath; and he remembered what she had said about having a "nose disease."

"I have no diving equipment, nothing. But we make a big strainer—you understand? From a fishing net. I tell my men, walk out until the sea is at your belts. Shovel sand so gently into the net. And today we find this!"

Carefully, he handed back the cup. "Congratulations. It's wonderful, and it couldn't have come to a nicer person. I mean that."

She smiled. "I knew you would be happy for me, just as I would be so

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happy for you, should you find—I do not know, perhaps some wondrous old story never written down."

"May I walk you back to your camp? I'd like to see it."

"Oh, no. It is so far, and the day so hot. Wait until I have something there to show you. This is all I have worth showing now." She gave him her sidelong look; and when he said nothing, she asked, "But what of you? Surely you progress. Have you nothing to tell me?"

He took a deep breath, thinking how foolish his wild surmise would sound. "I've seen a Nereid, Thoe—or somebody's trying to make me think I have."

She put her hand on his shoulder, and he could not believe her soft laugh other than friendly. "But how wonderful for you! With this, you may rate the stories you collect by their accuracy. That, I imagine, has never been done. Now tell me everything."

He did—the glimpse in the woods, the waving figure that had disappeared into the sea. "And so, when you said the Nereids you imagined had waved to you, I wondered . . ."

"Whether I did not know more. I understand. But I think really it is only one of our girls fooling you. We Greeks, we swim like fish, all of us. Do you know of the Battle of Salamis? The Persians lost many ships, and their crews drowned. We Greeks lost some ships too, but very few men, because when the ships were sunk, the men swam to shore. You are from America, Doctor, where some swim well and many not at all. What of you? Do you swim?"

"Pretty well," he said. "I was on the team in college; I'm a little out of practice now."

"Then you may wish to practice, and it is so hot. When we part, go back to the place where you saw this girl vanish. There are many caves along this coast with entrances that are under the water. Those who live here know of them. Possibly the Nereids know of them too." She smiled, then grew somber. "There are many currents, also. It is they who make the caves. If you are truly a good swimmer, you know a swimmer must be wary."

The Nebraskan was used to fresh water, and it was some time before he could bring himself to hold his eyes open in the stinging surge of the Saronic Gulf. When he did, he saw the cave almost at once, a dark circle in the sharply shelving bottom. He rose to the surface, took several deep breaths, swallowed and held the last, and dove; as he entered the cave's mouth, he wondered whether it held an octopus—small ones were offered in the market at Nemos every Saturday.

Twice he panicked and turned back. On the third attempt he reached the air, just when he felt he could go no farther.

It was dark—a little light conveyed by the water from the brilliant

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sunshine on its waves, a little more that filtered down from chinks in the bluff. It was damp too, and full of the spumy reek of rotting seaweed. As he climbed from the water, two small arms encircled him.

Her kisses were sharp with salt, her words Greek, but spoken with a lilting accent he had never heard. When they had loved, she sang a sea song to him, a lullaby about a child safe in his little rocking boat. After a time, they loved again; and he fell asleep.

The sun had set behind the bluff when the Nebraskan waded up through the surf. He found his clothes were he had hidden them and put them on again, humming the lullaby to himself.

By the time he was halfway to his inn, he had recalled a song about a mermaid who lost her morals down among the corals. He whistled it as he walked, and he was trying to remember the part about two kelp beds and only one got mussed when he opened the door of his room and saw his own bed had not been made. He found the innkeeper's wife in the kitchen and complained, and she brought him clean sheets (he was the only guest the little inn had) and made the bed herself.

Next morning he set out along the beach, instead of the top of the bluff. He saw her while he was still some distance off, and thought at first that her body was only the sail of some unlucky fishing boat washed ashore. After another hundred steps he knew, without having to look at her face. He turned her over anyway, and tried to brush the sand from her eyes, then kicked at the little, scuttling crabs that had nibbled at her arms.

A voice behind him said, "She was the maid at your inn, Doctor."

He spun around.

"She loved you. Perhaps you do not think it possible."

"Thoe," he said. And then, "Dr. Papamarkos."

"And yet it is." The tall woman unscrewed the top from her canteen and drank. "You, I think, cannot imagine what village life is like for such a girl, who has no money, no dowry. Then a stranger comes, and he is tall and strong, rich to her, a learned man respected by everyone. She heard the questions you asked of others, and she whispered her plan to me. I promised to help her if I could. This is all the help I can give her now, to make you understand that once you were loved. When you record love stories from the lips of old people, remember it."

"I will," he said. Something he could not swallow had lodged in his throat.

"Now you must go back to the inn and tell them. Not about you and her, but only that she is dead and you have recognized her. I will remain to watch."

The path along the top of the bluff was shorter. He climbed to it, and

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he had gone perhaps two hundred yards along it when he realized he could not convey the news of a tragic death with any decency in his inadequate Greek. Thoe would have to tell them. He would wait until someone came.

From the top of the bluff, he saw her take off her wide belt and canteen and drop them on the sand. The khaki shirt and trousers followed. She was lean—though not so gaunt as he had imagined—when she unbound her long, dark hair and dove into the sea.

When she did not come up again, he clambered down to the beach for the last time. A sign had been traced in the wet sand beside the dead girl's body; it might have been a cross with upswept arms, or the Greek letter ψ. There was nothing in the pockets of the khaki shirt, nothing in any pocket of the khaki trousers.

The Nebraskan opened the canteen and sniffed its contents. Then he put it to his lips and tilted it until the liquid touched his tongue.

As he expected, it was brine—sea water. ●

PRESUPPOSITIONAL GHOSTBUSTING

EXAMPLE: "Even *John* could write *this* sonnet!"
It tells us John's worth little, and the sonnet less . . .
The linguist shakes that sentence like a rug,
pokes it with tweezers, tortures it in a press,
seeking what in it *says* that John's pathetic,
seeking what in it *says* the sonnet's poor.
Those words aren't in it anywhere. And words
are the only things of which a linguist can be sure.
What phantoms from deep structure, bare and shapeless,
does every native speaker hear and comprehend,
haunting the interstices of that sentence,
betraying both John and sonnet in the end?
The linguist's mystification is still total:
why should they lurk in "even" and a modal?

—Suzette Haden Elgin

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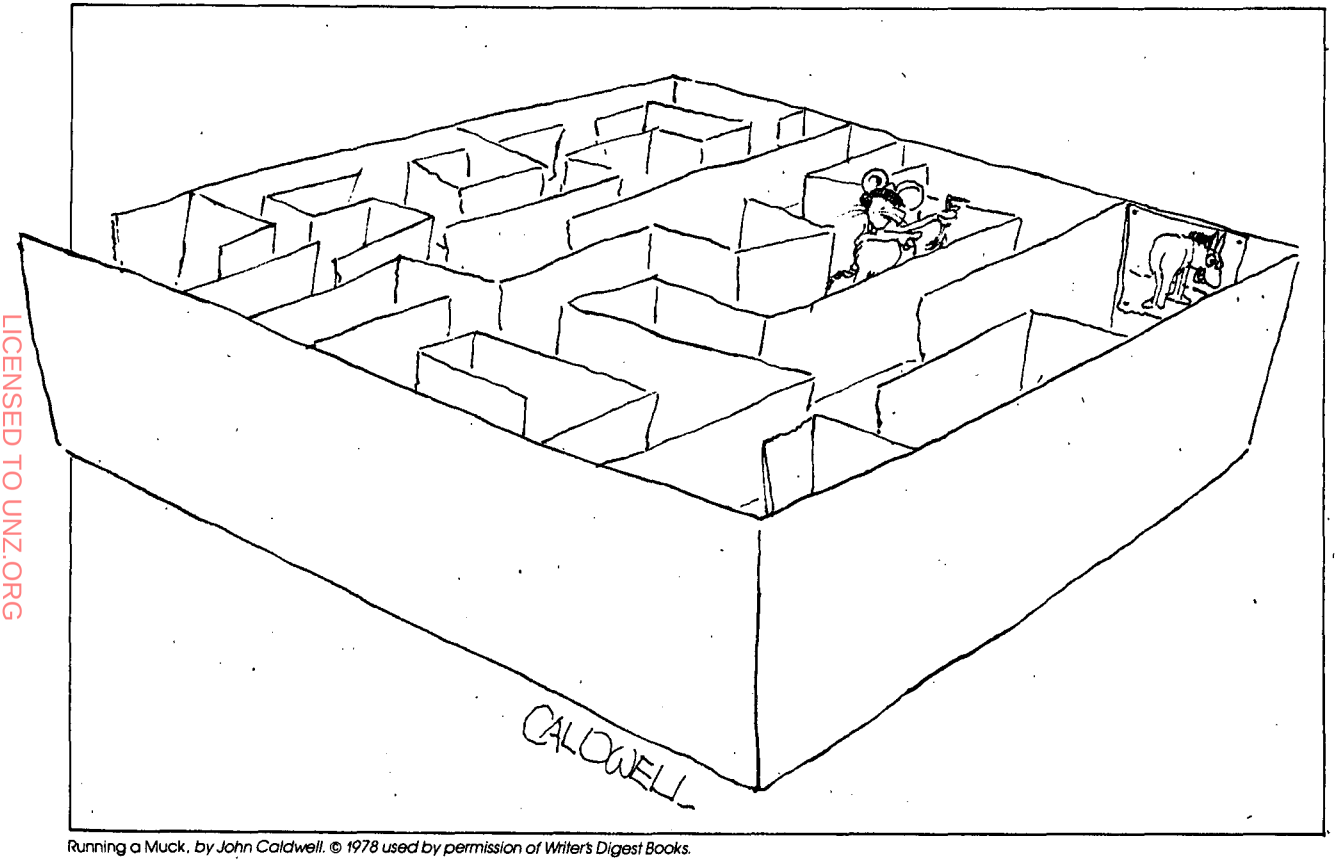

Running a Muck, *by John Caldwell. © 1978 used by permission of Writer's Digest Books.*

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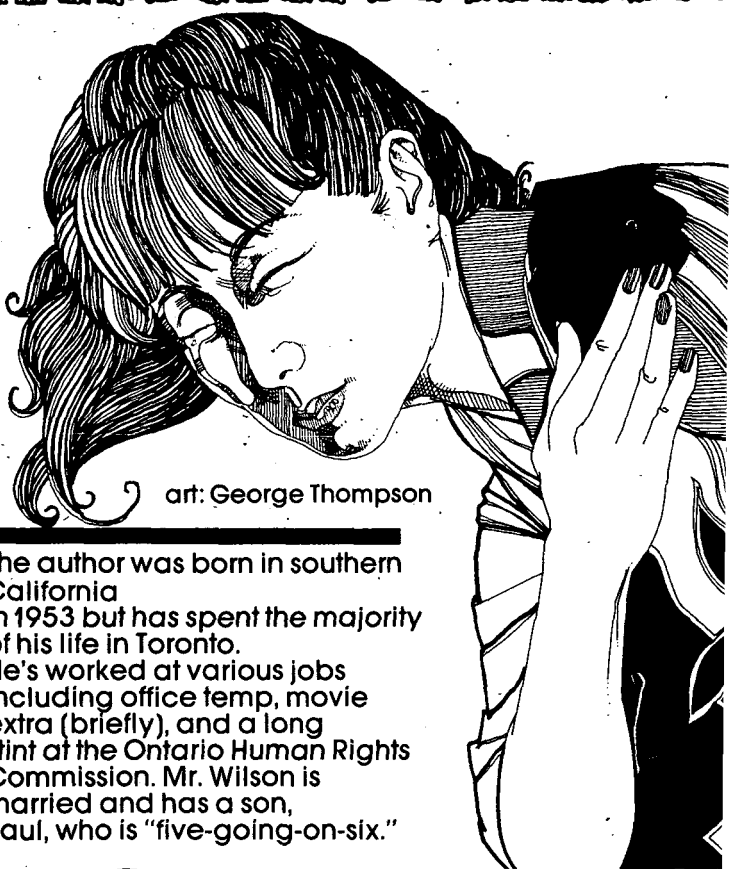

art: George Thompson

The author was born in southern California in 1953 but has spent the majority of his life in Toronto. He's worked at various jobs including office temp, movie extra (briefly), and a long stint at the Ontario Human Rights Commission. Mr. Wilson is married and has a son, Paul, who is "five-going-on-six."

BOULEVARD LIFE

by Robert Charles Wilson

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Michiyuki, *n. The "Lovers' Journey" of classical Japanese theater, ending in death.*

He embraced her beneath the Arc de Triomphe, his Mask radiating the syenite blue which signified desire, and then without warning it was over: the monument faded, the Place de l'Etoile became a painted scrim, a camera dollied above him like the motile skull of an extinct monster. Deiter gazed at the woman he had been holding. Her Mask flickered off and revealed a blank, affectless Masquer's stare. She might have been looking at a fencepost, he thought, or at a mirror.

This part was always disorienting. He felt better when the network meditech pressed an ampule of niacinimide into his arm. The soundstage seemed to snap into focus. He imagined he could feel the fine wires of the Mask where they were laced into the skin of his face, his throat . . . but that was impossible; the Mask had long since become second nature.

His director, Meg Culley, hopped off a camera crane and peered into his eyes. "Good work, Deiter. Much *yūgen.*" Her white hair was tied tightly behind her head. She wore jogging pants, a wrinkled woolen sweater. "Count backward from one hundred."

"Ninety-nine. Ninety-eight. Do we have to do this? Ninety-seven."

"Okay. You're fine." She added, "Ben wants to see you."

Ben Merrit was the series producer for *Boulevard Life.* "Bad news?" Deiter asked.

"Since when, this season, has there been *good* news?"

When he was finished with wardrobe he knocked at Merrit's door, a trailer at the rear of the immense soundstage. "In!" Merrit yelled.

Merrit sat behind his desk. His clothes were tailored to show off his body; he was a physical fitness freak. His head was propped laconically in one hand.

He looked at Deiter. His tan was artificial but flawless. He would have made a great Masquer, Deiter thought.

"It's your ukiyo girl," Merrit informed him. "She tried to kill herself today."

Correghasen, the project's Chief Medical Engineer, met Deiter at the door of his condo. "She's resting peacefully," he said. The words rang in Deiter's head with a kind of clamorous inevitability, as if this were the culmination of some long process he did not and could not understand. "The wounds were essentially superficial, though she lost a lot of blood. I think she'll do better here than in the clinic, don't you?"

The room had that sense of disarray about it, the suggestion of an emergency hanging in the air like stale cigarette smoke. It was Deiter's

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condo by contract but he had been sharing it with Rosalie for most of two seasons now. She had, of course, no home of her own.

"I want to see her."

"Soon," Correghasen soothed.

Deiter thought Correghasen ought to dress more like a doctor. The three-piece suit was disconcerting. And he had the bedside manner of a software salesman.

He thought of Rosalie lying in the bedroom. "Merrit said she cut her wrists."

"She did." Correghasen pouted in distaste. "She waited a long time before she called us, but we caught her in time. Took a few stitches. And we had the cleaning staff up. I'll stick around to, you know, change bandages, keep an eye on her. . . ."

"How could she do that?"

"With a kitchen knife. Are you upset, Deiter? Or offended? It's so hard to tell . . . you being the way you are." He squinted at Deiter's immobile face. "Is it really such a surprise? I would have thought there would be signs."

"There were, I suppose. She was losing weight. She wouldn't eat. Wouldn't do much but watch Masquerade." But this, he thought helplessly—*this*—

"Well, there you are, then. It's not so unusual. You have to remember the background these girls have. They come to the studios, network is all they really know, maybe they imagine they'll be Masquers . . . and the studio offers them a contract, but it's not a Masque contract, it's a contract for lesser duties, if you see what I mean. And they accept it, because it means getting *close* to the Masquerade, at least . . . but getting close to *anything* can be disillusioning, don't you agree, Deiter?"

He said, "I really would like to see her now."

"If you must."

He pushed through the bedroom door.

It was a clear night, and through the picture window Deiter was able to make out the distant lights of the floating suburbs like chains of luminous pearls leading off toward the tidal dams. An algae farm made flags of waste steam across the visible stars. Deiter drew the curtains.

Rosalie was watching Masquerade. She had wheeled the display up close to the bed. Deiter discovered with some chagrin that she had tuned in a satellite rebroadcast of *Boulevard Life*. Her arms were tucked under the blankets; her long black hair spread out over the pillows.

She looked at him briefly and essayed a tiny smile. "Deiter, hey," she said. And turned back to the display, eyes tranquilized. "It's you on there. I just never get over that. It really is you, isn't it?"

It was and it wasn't. He had tried to explain to her a couple of times.

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The figure on the display strode down a stylized cobble street. His clothes were excessive and his Mask was the livid argent of High Purpose; its expression—a skin of light concealing Deiter's own true features—was grim, determined.

The character's name was Dorian, and Deiter thought: he is my smarter twin, the *tsure* I carry around inside my head. When the protein-chip ROM buried in my brain tissue is activated, Dorian moves my arms and speaks with my voice; when the Mask illuminates, the face you see is Dorian's. He can't be me because he's wiser and more steadfast.

Dorian, he thought bitterly, would be able to understand why Rosalie had slit her wrists.

She withdrew one hand from the blankets—the bandage was enormous—and touched the skin of his face. The sensation was distant, ghostly. "I know it's you, Deiter."

She turned back to the display; her eyes drifted closed.

Deiter smoothed her blankets, then bent down to the thick shag carpet: something had fallen from the bed.

It was an empty plastic hypodermic ampule. He looked at it a moment, then buried it in his hip pocket.

The door opened. Correghasen bustled in, smiling limpidly. "A little sedation, hm? To get milady through the night."

When she was asleep Deiter asked Correghasen whether he thought she would try it again.

"Oh," Correghasen said, "probably."

It was the culimination of a long series of events and Deiter didn't know why it was happening or what to do about it. He wanted her not to die.

In the morning he left Rosalie with the medical engineer and went to work in the network compound, the unspoken questions circling in his head. During wardrobe he told Meg what had happened.

"Poor Deiter. You're really worried about her, huh?" She looked at him with an intensity he found nearly unbearable. "Okay," she said. "We'll talk about it afterward."

Meg climbed onto the camera boom, and the meditech administered thirty milligrams of Prompter in saline solution into Deiter's left arm.

Today the soundstage was the Ile St.-Louis.

Briefly—waiting for the Prompter to take hold—he was intimidated by it all, the booms, the scrims, the arm-thick power cables snaking across the set. In Meg's youth it must have been much simpler: when the markets were purely local, before the satellites had tied every place to every other place. Now it was all ritual and gesture and high technology. It was the only way to compete with the other networks —Eu-

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rovision, PanAsia, Sovnet—the only way to draw a fair market share against the afternoon kabukis, the blockbuster nightlies like *Kōshuku Tales* or *Nihon Eitaiguri*. *Boulevard Life* was essentially a kabuki for the Euro-American market: a morality play in which Dorian, a talented but penniless expressionist painter, was alternately threatened and tempted by the forces of power and conformity. The scrims were meant to suggest bohemian Paris of the late nineteenth century; and Deiter's Mask was a versatile one, especially subtle in the Four Noble Sentiments.

The Prompter kicked in at last, switching on the Dorian-programmed ROM inside Deiter's head; and in the monitor he recognized his ghost-face, his Mask-face, his *tsure* face; it was frowning, and faintly magenta.

"Rolling," the camera monitor announced.

"Go," Meg said.

He met the thin, doe-eyed woman he loved on the quay at Ile St.-Louis. Her name was Dorette, and she was an impoverished waif on the run from a mob of crooked costermongers.

The show was failing, Deiter knew. It had lasted this long, a third season, on its own momentum; but the core audience was increasingly fickle and PanAsia had pegged a strong love kabuki up against them in the major Pacific Rim markets. Deiter doubted they would make it into another season. And that was too bad: he liked being Dorian. He had learned to relax into the role. The Masquerade demanded his participation, of course; it wasn't passive—the protein biochip buried in his skull only supplied the lines, didn't pronounce them for him. But doing Dorian felt good, felt natural, the fundamental emotions pumping out of his stimulated hippocampus according the script cues, love and hate on a level everybody could understand. It was possible, on a good day, to become Dorian so completely that for a time he ceased to be Deiter at all.

Dorette kissed him chastely. Her Mask radiated a coppery orange, the color of anxiety.

The actress behind Dorette was a woman named Tasha Sung, one of the studio's fading stars; Deiter was occasionally forced into her company at social functions. She was chastely aloof. He didn't care. She was like himself; it was the Mask-generated holographic illusion that made her beautiful. Her real face was as numb and immobile as his own, nerves dulled or severed by the surgery.

He wondered how this episode would turn out. He didn't know. Nobody did, except maybe Merrit and the corporate *zaikai* and the software engineers who wrote the scripts into each season's ROMs. Security was very tight. But the series was running into its seasonal *shimai*, the final climactic scenes. Dorette had lost most of the puckishness that had marked her character in the first two seasons; life on the run was wearing

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her down. He had already saved her life once, when she had gone limp and unresisting before a hired assassin's fish-knife.

"They're onto me," she whispered. "I know it. There's nowhere left to hide."

He surrendered to the performance fugue.

Afterwards he followed Meg through the underground corridors of the network compound, his hand in his pocket, holding the plastic ampule between thumb and forefinger as if he could read there some significant hieroglyphic.

Meg Culley was old. She was perhaps the oldest woman Deiter had seen, in a community where beauty was a commodity and youth a prerequisite. She was old, but she moved with a calm agility, and her face was guileless—a geological record of frowns and smiles. The thing was, he trusted her.

He followed her to one of the staff cafeterias, to an isolated table where the network bureaucrats and high-ranking *zaikai* wouldn't be able to eavesdrop. She took yogurt and skimmed milk and a plastic lozenge of crackers and cheese. Deiter took nothing.

She maneuvered a strand of hair off her forehead with a sleeve. "Frankly, Deiter, I'm not sorry to see the show fading. Does that surprise you? The steady work is nice. But there's only so much you can do—from a director's point of view—with angles, dubs, mixers, all the techno stuff. It's all so ritualized anyway."

"You used to do live theater," Deiter said politely.

"I always did love the stage. I guess that's a defunct passion." She played with her crackers. "You I don't mind directing. You're human. Most actors give up to the character. Let their biochip do the work for them. You hang in there. There's a little bit of Deiter left in Dorian . . . and I think that strengthens the performance. Maybe it's heresy, but that's what I think." And she sighed. "You know what I'd like to do? Start a legitimate theater troupe. We'd tour. Like a chautauqua. Pull into a town, do some Shakespeare, show 'em what real drama is."

He nodded dutifully. The idea seemed very strange to him.

Meg leaned back in the laminated plastic chair. "I guess it's the u-girl you want to talk about."

"Rosalie," Deiter said.

" 'Rosalie'? That's cute. Did you happen to catch her last name, too?"

Deiter was silent.

She started to say something, interrupted herself. "No. You're right. Bless me, I'm starting to think like Merrit. You want to talk about—" She sipped her skim milk. "Rosalie."

Deiter tried to explain.

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He was not accustomed to talking about these things. And it had not, after all, been terribly unusual, at least in the beginning—no different than a dozen other such arrangements he had enjoyed in his career as a Masquer. She had been simply one of the ukiyo girls, tight pants and adhesive silk blouses, one of what Merrit called "the secretarial pool." It was understood that she came with the job, like medical benefits. As the *shite* in *Boulevard Life* he was entitled to the company of a ukiyo girl. Deiter had worked all his adult life in Masquerade and the system did not offend or shock him. He had taken advantage of it many times before. He had no reason to expect this would be different.

Except that—he tried to tell Meg—this time it *was* different. Rosalie was not just another u-girl. Physically she was more perfect; he had fallen in love with, first, the long black hair, the olive skin, the mobility of her face. But it was not just that, either. There was a totally unexpected sense of kinship between them. He thought maybe it was because they came from similar backgrounds: both had grown up on the fringes of the network. Deiter's parents (both now dead) had been in Camera and Processing; Rosalie's folks were junior technical animators who had moved back East (to Edo) during the recession. Masquerade was all they knew. Deiter had had some breaks; Rosalie had not.

But the connection went even deeper, in some unspoken way. She seemed genuinely responsive in bed. Out of it, she enjoyed being with him. She was not—like so many of the u-girls Deiter had been with—merely covering up an instinctive disdain for his facial inadequacy.

He had begun to think of it as a species of *yūgen*—the ineffable sense of mystery a good actor brought to his role. Their relationship, Deiter thought, had much *yūgen*.

"All right," Meg said. "But lots of Masquers grow fond of their—their women."

"She went into some kind of decline," Deiter said. "It didn't happen all at once. At first it was little things—not wanting to leave the condo, or crying in the morning when she thought I was asleep. And then it was obvious. Despondency. She wouldn't do anything but watch Masquerade. She lost weight." Deiter leaned back in his chair. "I begged her to see a doctor. But she wouldn't talk to anyone. For the last few weeks she'd had insomnia pretty bad."

And yesterday, Deiter thought, she slashed her wrists with a kitchen knife, and phoned Correghasen only when it was nearly too late, when so much of her blood had been washed down the stainless steel basin of his sink.

From love to despair. Just like Dorette, he thought, and then suppressed the notion: the parallel disturbed him.

"This is still hardly news," Meg said, though her voice was gentler.

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"What do you suppose it's like for a woman like that?" She frowned. "Most Masquers would have discarded her by now. That's the way it's supposed to be—right? Involvement demands emotion. And you've separated yourself from that. Cut yourself off—literally."

"Hiding behind the Mask," Deiter said. "That's a cliché."

"Is it? Prompter releases a lot of emotive energy from the nervous system. They say a Masquer can lose the capacity to respond emotionally to real life. Is that how it is, Deiter?"

He stared at her.

She looked away. "Yeah, well. I always did figure you had talent, Deiter." She brushed back her hair again. "You should come in with me. Do the legitimate theater thing. You can get physiotherapy for the face." She toyed unhappily with her empty glass. "No, I suppose not. Once a Masquer always a Masquer, right, Deiter? The Masquerade forever. . . ."

"It's Rosalie I'm worried about right now."

" 'Worried about'? What does that mean? You want to save her from herself?"

He took the ampule from his pocket. "I found this next to the bed."

Meg turned it over in her hands, frowning. "You know what this is?"

"A hypodermic ampule."

"Not only that. A Prompter ampule."

"Are you sure?"

"Sure I'm sure. You can see the little Sandoz mark. A disposable Prompter ampule."

"I thought so," Deiter said. "But why Prompter? What's Correghasen up to?"

"I don't know." She tapped her chin thoughtfully. "I don't know . . . but maybe we should ask Ben."

"Why Ben?"

"Maybe no reason. But he carries the keys to the medicine cabinet—Ben and Correghasen countersign all the chits. And remember, Rosalie was Ben's u-girl before the network picked up *Boulevard Life*. Then he got bored, and she was farmed out to you."

His fists clenched and unclenched on the table.

"Does that bother you?"

Deiter said nothing. He hadn't known.

"Well, gosh," Meg said, nodding as if something had been confirmed. "There's hope for you yet, Deiter."

He tried to call Rosalie from the payphone in the hallway. Correghasen answered, his pudgy features swarming across the CRT.

"Not to worry," the medical engineer said. "She's sleeping peacefully. Ben instructed me to stay with her."

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Deiter said, "I want her to stay alive. I'm holding you responsible."

"Is that anger I hear?" Correghasen squinted. "Deiter, Deiter! This isn't Masquerade, you know."

Merrit was in his office, the trailer at the rear of the soundstage, feet up on his desk. He was playing with an antique executive toy—a silver-plated acrobat with a balancing rod, spinning on needlepoint atop a column.

Deiter explained what had happened with Rosalie.

"I know," Merrit said. "Correghasen's been in contact. It happens, Deiter. You know that." He added, "You should have knocked."

Deiter slid the Prompter ampule across the desk.

Merrit looked at it for a while. His smile-lines faded. His frown-lines kicked in. "I don't know what this is. Meg, do you know what this is?"

Meg had sidled into a chair behind Deiter. "Something to do with Deiter's ladyfriend, I think."

"She's dying," Deiter said. "I don't want her to die."

"Oh, Christ. Calf love." Merrit palmed the ampule. "How pathetic. Masquers age badly, you know, Deiter. I should have expected something like this."

Deiter was thirty-two. "Tell me what's going on," he said, "or I walk."

He heard Meg's indrawn breath, almost a gasp.

There was a momentary silence, then, "Bullshit," Merrit said. "You won't walk, Deiter. It's unprofessional. Walk, and you're finished in Masquerade."

"You too," Deiter said. They were all, of course, hanging by a thread. Merrit was in the lowest echelon of the *zaikai*: an embarrassment like this would destroy him with the studio bureaucracy.

"We'll get somebody else. Another *shite*."

"Not fast enough to meet the shooting schedule."

There was another and more protracted silence. Merrit had begun to sweat. "Christ," he said finally. "I hate you people. It's like talking to a corpse."

Deiter said, "Do I have to get up and go out the door?"

"Do it. Go. I'm not stopping you."

"The man has spine," Meg commented. "Maybe I'll go with him. Can you deal with that, Ben? Losing your *shite* and your director in one afternoon? If you explain it very nicely to the *zaikai* they might even keep you on in some capacity. Can you use a broom?"

"Fuck you, too, lady." But Merrit turned to Deiter, suddenly expansive. "Listen, it was the girl's idea in the first place—"

"What was?"

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"The whole thing! The 'plant. The Prompter. She would have gone for the Mask, too, if we'd let her. . . ."

Deiter was stunned. Meg put in, "We?"

"Me and Correghasen." Merrit's composure had begun to creep back. "Mostly Correghasen. He saw it as, you know, a way to pick up some change on the sly. And he was in a position to falsify the medical records. It was not our *idea*, but it made a kind of sense—"

"Why?" Deiter said. "Why would she want that?"

"What does any u-girl want? She wanted to get that much closer to the Masquerade."

"I don't understand," Meg said. "She wanted a biochip implant?"

"And a daily dose of Prompter," Merrit said. "Not enough to send her into a performance fugue. Not telling her what to say. Just ticking along through the ganglions, you know—telling her what to *feel*. One thing you know for sure about a ukiyo girl: she grew up on Masquerade. To them Masquerade *is* the real world—real feeling. Profound emotion." He pronounced the words with visible distaste. "The Prompter stimulated that little knot of nerve cells, what they call the hippocampus, so she was feeling strong emotions, and the biochip sorted them and made them specific according to the script she was playing out—love, hate, and so forth. Just like in her favorite 'buki."

"Which is what?" Deiter asked.

"What else?" Incredibly, he grinned. "Oh, we picked up a little change selling her Prompter. But we had you in mind, too, Deiter. The network analysts said your affect began to flatten during the second season of *Boulevard Life*. Correghasen thought this might put the edge back. Lovely idea, no? Rosalie becomes a mirror of Dorette. The two scenarios converge. In life as in art. We figured it would beef up your *yūgen*. . . ."

He was aghast. "You 'planted her with *Dorette?*"

"It was Dorette she wanted." Merrit shrugged.

"Production chips are classified," Meg said. "If the network finds out you made a copy of it, you're crucified."

"Who's gonna tell 'em? Not me. Not Correghasen. Not you, Meg—not unless you want to get tied up in a long litigation. Not even Prince Valiant here, since he's smart enough to know the network *zaikai*'ll burn out dear Rosalie's brain if they get wind of this indiscretion. A security risk is nobody's best friend."

"The chip," Deiter said. "Is that what's killing her?"

"Deiter, you worry too much! She's a ukiyo girl. That's all. That's all she ever was. You think you like her? Bullshit. It's the program you like. The biochip bleeding out pathos at the base of her tiny brain. Take it away, Deiter, and what's left? The same pathetic little zero I was fucking for a year and a half."

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"No," Deiter said. "She loves me—"

Merrit barked out a laugh. "She *loves*. She loves because she is programmed to love. It wasn't you she wanted to get closer to, Deiter. It was—" He waved his hand, as if to include the soundstage, the network compound—for all Deiter knew, the hundreds of relay satellites flung like lotus petals across the sky—"*the whole thing*."

There was a horrible plausibility to it. Rosalie would have acquired the biochip at the beginning of the second season . . . which was when their relationship had picked up its strange, wild impetus. And she began to sink into despair early in the third season, when Dorette did her turnaround. Despair and suicide.

In life as in art. What she had loved was not Deiter but his *tsure*, his better half, the echo of Dorian. Something in him withered at the thought.

"The biochip," Deiter said flatly. "How does it come out? How does the Dorette story end?"

"You know the *zaikai* keep those things secret. Even from me—mostly. Even from Correghasen. I only found out a week ago. And we were going to have it removed as soon as we could." He lost some of his self-assurance. "The third season biochip was a surprise to everybody. It's because of PanAsia. They've been doing so well with the *michiyuki* business. You know—the lovers' fated final journey—"

"How's it come out?"

"The two of you leap into the Seine," Merrit said. "It's a terrific finish."

Meg climbed on the back of the scooter while Deiter kick-started it. He drove, too fast, down the narrow lanes of the network compound.

"Do you believe him?" Meg asked against the wind.

"About Rosalie?" He was forced to admit it. "Yes."

"One thing," Meg said, while they slowed for a supply truck. "He said they were going to remove the biochip. As soon as they could. But Correghasen could have checked her into the clinic anytime—certainly after she tried to suicide."

Deiter drove faster.

"I think," Meg said, "she has become an embarrassment to them."

Deiter's condo complex was at the northern extremity of the compound and everybody who lived there was a Masquer or technician or crew. It was a white slab with an elaborate earthstation atop it, banks of antennae drinking in data from satellites. Night had come down by the time they arrived.

Meg rode up the elevator with him. Deiter felt the pressure of her silence.

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He rehearsed it in his mind as the floors ticked away—the way it must have been.

He pictured Rosalie coming to Correghasen, making a little offer. *I'll pay you money. You make me more like that Dorette in the Masquerade.* Correghasen, of course, would have sent her away. But some seed of it must have grown in his mind. *In life as in art.* And so it was done. The risk was taken. They had opened up her head and put in a copy of the Dorette biochip and sent her back to be with Deiter, the dumb and affectless Masquerade star. The maintenance doses of Prompter had lit up little lightbulbs inside her, bright novae of emotion; and the chip had said *this is what love is.* And so she had loved him. On cue.

And now the layers of protein circuitry built into the chip had ablated one by one, and the script was suddenly different.

He thought of Rosalie and the fictional Dorette, their lives funneled together, Rosalie transforming herself after the fictional template, making her relationship with Deiter into something she perceived as more pleasing: art, play-acting, Masquerade; following Dorette down the road into despondency and beyond, the Death Journey, *michiyuki.* . . .

The door of his condo stood open. Correghasen was inside, lolling in a chair—drunk, Deiter thought, or severely 'luded. There were Prompter ampules all over the floor.

"Where is she?" Deiter said.

Correghasen stared blearily up at him. "It was inevitable . . . there was no avoiding it. . . ."

The bedroom was empty. The kitchen.

He dragged Correghasen into the hallway. "Tell me what happened!"

"Ah, yes. Deiter. Ben said you would be coming. He called. Cancel the plans, he said. Don't let her do it. But by then it was too late. She—ah, gently, Deiter!—she mainlined enough Prompter to schiz out a horse."

His voice was focused now, taut. "Tell me where she is."

"You want to save her, Deiter?" He smiled faintly. "That's touching. But, oh, not possible. Even if she's still alive. The Dorette biochip has just about run out. She'll go back to being what she was before—if she lives. And you don't want that. Not even Rosalie wants *that.* Without the chip, Deiter, she'll be just like you are when Dorian is turned off. Blank. Empty—"

"Where," Deiter said, his fists clenched on Correghasen's lapels.

The medical engineer pointed down the hallway, to the door that led to the roof.

Meg brought up Correghasen's black bag. Deiter propped the roof door open. The sky beyond was starless.

She plugged the last Prompter ampule into a syringe, trembling. "This

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is dangerous for you, too, Deiter. You're not going out on some gimmicked-up stage with Tasha Sung. What happens out there happens for true. You know that?"

He looked at her. It seemed to him that, for the first time in years, he could actually feel the immobility of his face. It was leaden. "I need Dorian," he said. "I need the Mask. She would never respond to . . . just Deiter."

"Listen to me. *Michiyuki*, Ben said. You know what that implies. A lovers' suicide pact. So you can *look like* Dorian, but for Christ's sake don't *be* Dorian—don't go into a performance fugue. If you play out that particular script here, with her, it's for keeps."

She glanced at him, then went back to fumbling with the syringe.

"In a way," she said softly, "Correghasen's right. Even if she lives, they'll extract the biochip. The Rosalie you get back won't be the one you want. She can't be. Are you aware of that?"

Deiter nodded.

Shimai, he thought. One way or the other, it was all inevitable now.

She pressed the ampule into his arm.

The Prompter, a cyclic tryptamine alkaloid, kicked in just as Deiter passed that taut guywire of a dish antenna.

Deep inside him, silent rivers began to flow. A biological switch detected the Prompter in his bloodstream and activated a tiny battery pack under his ribs. The Mask flickered on; his vision narrowed. The mercury vapor lamps at the far corners of the rooftop seemed to shatter into diamond haloes.

She's here somewhere, he thought. He refused to consider the possibility that she was already dead. She was here; he would find her.

Inside him, Dorian stirred, restless.

Deiter frowned and clenched his fists until his fingernails drew blood.

It had always been so easy. Just let the Dorian persona take over; the Mask would make everything gauzy and bright and the words would fly from his mouth like pastel butterflies. He trusted Dorian. Dorian was his better half, his wiser *tsure*. But now the equation was upside-down; now it was Deiter who needed to be in control.

He circled the sheet-steel elevator shed, gravel crunching under his shoes. Up here, he could smell the ocean in the wind. He could see the ocean, now, too, as he moved warily toward the building's edge. There was no abutment, only a knee-high rib of concrete. He looked out over the dark ribbon of ocean and saw the phosphorescence of the floating suburbs, the boat barrios, the hard glint of a distant tanker kaleidoscoped by the back-refraction of the Mask. Dorian's image, he knew, hung in

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space a few microns over his own, and the predominant color was a poisonous malachite: of yearning, of mourning.

He spotted her then.

She had climbed into the latticework of a VHF tower at the extreme western corner of the building. The wind pressed her nightgown into the contours of her body. Her hair tangled out behind her. She seemed to be contemplating the view.

"Dorette," Deiter said.

She was deep in a performance fugue. She had overdosed. Before, Deiter thought, she had been gliding along in realtime, the Dorette program running like a deep current in her. Now she *was* Dorette. The undertow had taken her. Her biochip would be struggling to make sense of the overload, attempting to play out its script.

Her head turned languidly. Her pupils were the size of coins.

He moved closer, but gradually, slowly, not wanting to startle her into the act of suicide. She was inclined over the sheer wall of the condominium building. The posture, Deiter recognized, was of Noble Intent.

He stopped—almost near enough to reach her now. Her feet were bare, bleeding where the pebbled roof had cut into them. Her arms were wrapped around the rusty girders of the VHF tower.

His Mask radiated a turquoise light. He recognized that Dorian wanted to join her: that this was the culmination of the *Boulevard Life* story, this mutual renunciation of the corrupt world. They would fall, walk the road of death, become immortal.

"Give me your hand," Deiter said.

"Dorian," she said, looking at him, a faint surprise creeping into her features.

He wrapped an arm around one of the girders and reached for her.

She withdrew her hand. "They're after me. They've found me. They know where I am."

"I'll protect you," Deiter said.

"Neither of us is safe anymore." She closed her eyes.

"That's not true," Deiter said. "I love you."

Her left hand uncurled from the rusty antenna strut.

"Together," Deiter pleaded. "Give me your hand."

She reached out.

A tide of impulses swept through him. There was fear, outrage, vertigo. Above all there was the urge to play out the scene the way it had been scripted. It would be so easy, he thought . . . *michiyuki*, the Death Journey, and then only silence. . . .

Deiter caught her wrists. She fell; he wrenched himself backward.

They rolled together over the gravel; then Deiter's vision cleared mo-

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mentarily and he was able to see Meg running from the stairwell with a syringe of niacinimide in her hand.

"Dorian," Rosalie said. She touched his cheek. He hardly felt it. The Mask was flickering, flickering, as if some connection had come loose. A welter of strange emotions swarmed inside him.

"You're crying," she said.

And then screamed, as the drug antagonist entered her bloodstream.

Deiter saw her twice after that.

Boulevard Life was discontinued at the end of its third season. Deiter stayed to finish taping—leaping with Tasha Sung into a River Seine composed of foam rubber and impact cells—on the condition that Rosalie would receive the appropriate medical care.

Merrit brought the cast and crew together on their final day to celebrate the announcement of his new nightly, *Trial by Ordeal*, the studio's first entry into the big-time *kōshuku* market. Rosalie was there, hanging on Merrit's arm until he shook her loose. Then she approached Deiter.

He told her he was getting out of the business. He was doing physiotherapy for the face. He had taken up Meg's offer to join her touring company.

She nodded politely and drifted away.

Deiter came back a few weeks later, when the final scenes of *Boulevard Life* had been edited and delivered for broadcast, when the sets were being broken down and trucked away to warehouses.

She was in the shadows by the camera boom. Watching.

"It's our soundstage now," she said. Her hair was fresh and combed, her eyes luminous. "This is where we'll be doing it. *Trial by Ordeal*. I have the female lead. Ben says he should have known . . . he says I'm talented, I have much *yūgen*. I'm a natural, he says."

Deiter tried to smile. It was a new skill and still somewhat painful. "I guess it's what you wanted all along."

She nodded. He thought she might have wanted to smile back, but of course she could not: the Mask had been freshly installed and the nerves were newly severed. ●

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by Sidney J. Van Scyoc

MEADOWS OF LIGHT

The author currently lives in Hayward, CA where she is the custodian of seven assorted cats, an Afghan hound, a Basenji, a Welsh pony, thirty-six trees of all sizes and shapes, twenty rosebushes, a cactus collection, and one nice husband. Since most of these entities are hungry and thirsty most of the time, she feels fortunate to find an occasional moment to write. Her next novel is *Downtide*, to be published by Berkley Books.

art: Daniel R. Horne

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It was near midday when the explorer dropped away from the *Incara* and began its swift descent. Glancing down earlier from the *Incara's* forward port, Mirika had seen little but clouds. Now the explorer breached those and she looked down on a land that was sunwashed and bright, cut by wide rivers and bands of trees. White-peaked mountains rose in the distance, framing meadows faintly touched with yellow.

Something caught in Mirika's throat. Bright, sparkling, the land below was like a promise. But a promise made to be fulfilled? Or to be broken? If this continent were as treacherous as the first two had been—

For a moment she could not catch her breath. The Concordance had granted them a grudging temporary license to just this one world. Inhabitable worlds were scarce, after all, and they had poisoned their own. If they could not make a place for themselves here, if they could not forget their hostilities and build a successful settlement—

Covertly Mirika glanced at her crew mate. Sella was a Padiri in every particular: thin, colorless, unbending. Today her face revealed as little as ever, but her hands hovered stiffly over the controls, as if tension gripped her to the fingertips. "This land. Here," she said, glancing at the port.

"Here," Mirika echoed, although she knew Sella's words were not meant for her. They had seldom spoken since they had been assigned to crew together. What did a Padiri and a Nesopian have to say to one another, after all? The two peoples worked and lived side by side on the *Incara*, as the Concordance resettlement panel required, but they avoided any unnecessary contact or communication.

Perhaps Sella's words had been meant for Kirrel, the Padiri who had piloted the explorer on its first descent. If so, Kirrel would never hear them.

Perhaps they had been meant for Lara, who had held second seat on the explorer's second run.

Lara would not hear them either.

Neither would Phila and Iryon, the Nesopians who had crewed with Kirrel and Lara.

But Mirika and Sella had heard *their* words. They had convened in the crew room as instructed and watched the tapes of their brief forays to the surface. They had listened until their voices spun off into dying silence. Then, sickened, Mirika fled to her quarters. When she finally slept, she dreamed her most frightening dream of the voyage.

She dreamed that she went to Shipmaster Peers and requested that he assign another Nesopian to her seat on the explorer. Nodding, he took down the crew list and raised his pen to strike out her name. The terror of the dream was in the pity she saw in his eyes as he set the pen aside and returned the crew list to its place unaltered. Pity for what would

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happen to her on the world below? Pity because he was sending her to her death?

Mirika shivered. She had lived with fear from the moment of that dream. But she had not gone to Peers and asked to be relieved because the meaning of the dream was clear, and a dream was not to be denied. She was intended to come here even if she died as Phila and Iryon had died.

Shivering again, she leaned forward and saw that their course had already carried them lower, nearer the mountains.

"We'll touch down soon. Will you choose the landing site?" Sella's voice was brisk.

"You want me to do that?" Mirika glanced at Sella in surprise, then frowned at the strain she heard in her own voice. The recorders they wore were running, capturing every word, transmitting it to the *Incara* to be recorded.

"Yes. Yes, do that."

"Of—of course." Why shouldn't she be the one to choose the landing site? They had been instructed to share decisions and responsibilities equally.

There was much of greenness and much of yellow below, as if flowers bloomed in grassy meadows. Bands of silver water fell down the mountainsides and curved through the meadows. The upper mountainsides were rugged and barren, but at the lower altitudes, trees grew in green spikes.

It was so bright, it was so beautiful, Mirika's hands quivered. *There, land there in the flowers*, she wanted to say. *Let us land in meadows of light.*

But Kirrel and Phila had landed in a tropical grove, Lara and Iryon in a land of golden dunes. How could she and Sella trust the inviting land below after those savagely broken promises? Instead she pointed out a level spot on the nearest mountainside and said, "There. Land there."

She expected Sella to object. Instead the older woman merely peered out the port and nodded.

Minutes later, the explorer settled to earth. There was a brief chatter of sympathetic vibrations as the power unit shut down, then the first silence Mirika had known since the *Incara* had lifted them from the holding camps at Trenivve. She stood, unsteadily, and opened the hatch.

The first thing that struck her was the cold. The second, as she peered out, was the absolute barrenness of the spot where the explorer rested. The air was brisk and astringent. Mirika tasted it carefully even though the Concordance survey had assured them it was safe to breathe.

The Concordance survey had assured them of little more: air safe to

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breathe, water, pockets of land capable of supporting them. And they had been issued the minimum of tools and materials necessary to build their settlement.

On that point, the resettlement panel had been adamant. They had been given one ship to bring them here. And when they arrived they were not to separate into Nesopian and Padiri communities. They were to build a single settlement, governed by a single body, authority to be equally balanced within that body. If the Concordance resettlement panel discovered they had done otherwise when it inspected at the end of five years, they would not be granted final title to this world. Instead they would be returned to the holding camps on Trenivve.

They could never return to the poisoned waters and sterile lands of Hadrikar-twain, their home.

Frowning, Mirika turned—and was startled by the stark grimness of Sella's lean features, by something like burned-out hatred in her pale eyes. Uneasily Mirika licked her lips. "It—it's cold here," she said meaninglessly.

Sella stepped past her without responding.

Their boots rattled against loose rock as they emerged from the explorer and walked around it to gaze up the flank of the mountain. Then they returned to the front of the craft and looked out over the yellow-flecked meadows below.

Again Mirika felt her breath catch. The flowers were so bright they seemed to blaze in the midday sun.

"We were naive, of course," Sella said in a flat voice.

"What?" Mirika said, startled.

Sella's pale gaze was as flat as her voice. "We were naive when we sent down the first two crews. How long has it been since any of us has gone to nature except for pleasure?"

"I don't know," Mirika said, remembering the domed forest at Pithicon, the sea pools of Nethlor. Bright birds, colorful fish— The tame creatures had come and fed from her hands.

Bright birds, colorful fish—dead now. The Padiri had attacked the reserves savagely. Mirika drew a shallow breath. "This world is not a nature reserve."

"Of course it isn't," Sella said briskly. "It isn't a park. It isn't a resort. It isn't a tamed place designed to give us pleasure. But the other crews approached it as if it were." She turned to Mirika, her gaze unrelenting. "We will not."

Mirika glanced down, struck by a sharp, irrelevant sense of grievance. "If the Padiri had not sent defoliant bombs against the forest at Pithicon . . ."

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"Yes. And if the Nesopians had not poisoned the lakelands in Rial Province?"

If. Mirika closed her eyes. "We will be more careful than the others."

"We will be much more careful than the others."

There was little to say to that. Sella commed the *Incara* and spoke briefly while Mirika unloaded their packs. Their equipment was sparse: bedding, food, water, a few instruments. They themselves were the primary instruments. They would register the characteristics of the terrain, would weigh and evaluate each detail of the environment. The Concordance had declined to equip them further.

They had already demonstrated what they could do with sophisticated equipment, after all, Padiri and Nesopians alike. They had demonstrated it in the cities, in the countrysides, in the reserves. They had demonstrated it with a competence so savage that only a few hundred thousand had survived from a population of millions.

And none of those would be permitted to leave the camps on Trenivve if those who had come aboard the *Incara* could not plant a settlement here and bring it through its first five years without destroying each other.

"Are you ready?"

Mirika jumped, her heart speeding. She had not heard Sella step up behind her. "I'm—ready. Where shall we go from here?"

Sella turned, studying the mountainside with colorless eyes. "We won't go up. We can't establish a base at this altitude. And the rocks may not be stable."

Mirika nodded. Certainly the dunes where Iryon and Lara had landed had not been stable. Who knew what had created the tunnel that had collapsed under Iryon's feet as the two of them walked casually across the golden sand? Some large burrowing creature; an underwater stream, thinly crusted over? Lara had tried to save him, but the sand had trapped her too and funneled in around them both. They had smothered within minutes.

Uneasily Mirika squinted into the early afternoon sun. "Perhaps we should spend the night just above the tree line, in the open."

"We might want to spend tomorrow there as well, observing the area."

"Yes." But eventually, they both knew, they must approach the brightly blooming meadows below. If there were arable land, it would be there. And so they must know what else was there too. "Have you—have you dreamed ahead to tomorrow yet?" It was an impulsive question, born of concern. Her own dreams had brought her only to today.

Sella's face darkened. "I don't dream. I never dream."

Mirika recoiled. "Everyone dreams," she protested. How else was one

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to sort the events and impressions of the day? How else take guidance for the future?

"Perhaps every Nesopian dreams. Do you want to tell me what it's ever gotten you?"

Mirika felt her own cheeks color. "Do you want to tell me what not dreaming has gotten you?"

It took just those few words. They glared at each other, Sella with her hands clenched into fists, Mirika with her dark eyes narrowed, her heart hammering. Instinctively she glanced toward the packs where the char-pistols nestled in their holsters.

Sella saw the direction of her glance. Briskly she retrieved the packs and brought out holsters and belts. "We'll wear these now," she said. "We don't know what we may meet here." Her eyes, as she strapped the first belt to her narrow waist, offered clear warning.

Mirika took the second belt and cinched it. The weight of the pistol against her hip was reassuring.

Tense, guarded, they descended. In some places, scrubby plants grew. In others there were boulders that seemed to have fallen from above, although there were no visible scars on the mountainside. The sun was bright, the air brisk. The meadows blazed below. Each time Mirika paused to look down at them, her breath caught in her throat.

If flowers grew there, surely their settlement could grow there too.

But there had been flowers in the forest that had killed Kirrel and Phila.

And there would be Padiri in their settlement, living among them. They would meet them every day, in every public place. They would hear their voices, see their faces.

Sella turned and looked back. In her eyes was the bleakness Mirika had seen earlier, as if hatred had burned to ashes. But she said only, "We didn't have our meal this morning. It's time to eat."

Mirika's stomach contracted, but she did not intend to eat at Sella's command. Instead she sat on a large rock and observed obliquely while Sella ate. There was no ceremony in the act. The Padiri treated food as if it were simply fuel. Sella ate directly from the containers, scooping up everything with the same utensil, scarcely pausing between bites. When she was done, she wiped her lips on her cuff and stood. She did not seem to notice Mirika's carefully expressionless face. Perhaps she didn't guess the distaste Mirika felt. Everyone knew the Padiri were insensitive as well as graceless.

Wordlessly they continued down the slope.

They neared the tree line in late afternoon. Sella walked as if she were made of iron, briskly, seldom pausing. Wearily Mirika shielded her eyes against the sun. The trees were tall and straight. Using the glasses, she

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could see that their trunks were covered with rugged bark. Their leaves were not leaves at all but green quills instead, long and drooping. The tree line was sharply demarcated. Above lay the barren, rocky mountainside. Below the trees grew tall and dense, casting a solid, dark shadow.

"Do you see anything?"

Carefully Mirika lowered the glasses. Her head had grown light with hunger and altitude. "Nothing." No animal. No bird. No sign of life at all.

But something had lived among the trees of the tropical forest where Kirrel and Phila had died. They had not seen it clearly on the tapes. There had been too much confusion in those last moments, when Phila had tried to pull the creature off Kirrel and it had lashed her aside as easily as if she were a child.

"Let me look."

Silently Mirika gave Sella the glasses.

"We'll stay the night here, as we planned," Sella said when she lowered the glasses. "It will be dark soon. Are you going to eat now?"

"No," Mirika said, annoyed. If Sella thought she was going to dictate the time of Mirika's meals . . . .

"If you do not eat—"

"Then I will be hungry," Mirika snapped, stung by Sella's didactic tone. If she could shovel in the food as carelessly as a Padiri— But she could not. It was better not to eat at all when she was tired and annoyed.

But Sella ignored the warning tone of her response. "Yes, and if you are hungry, you will not be alert. One of us must stand guard at all times tonight."

Mirika bristled. "If you don't trust me, then perhaps you'll have to do it yourself."

Sella's eyes narrowed. Her thin lips tightened. "I'll take first watch," she said finally, turning away.

But it was not dark yet, and so they had to sit together while the sun set and the mountainside cooled. Hugging her bedding, trying not to shiver, Mirika thought of moving away from the Padiri woman. Not far. Just far enough to begin her evening induction in privacy. But she was uneasily aware of the dark trees below.

Turning her back, pulling up her bedding to hood her face, she began the soft repetition of a set of stanzas her mother had composed for her more than eighteen years before. Tonight she needed the clarity these well-worn syllables brought to her dreams.

Later she did not remember when she fell asleep. She did not even remember lying down. She passed directly from induction to sleep with no awareness of the transition.

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And then, abruptly, Sella was shaking her by the shoulder. Startled, confused, Mirika sat up. "What is it?"

"It's your watch. And don't wander away. I haven't heard anything, but I don't want to be left alone."

Mirika frowned up into Sella's bony face. "Of course I won't leave you," she said, stung. Did Sella really think she would wander away and leave her unprotected?

Perhaps she did. The Padiri woman wrapped herself in her bedding and lay with her eyes tightly shut, but it was a long time before she slept. Mirika saw that by the light of the two moons that had risen.

When she was certain Sella slept, Mirika cast around for memory of her dreams—and realized she had none. None at all.

That shook her so badly that for a while she was hardly aware of the cold. She stared into the starlit sky and tried to find even the faintest trace of her dreams. There was nothing.

Had she slept without dreaming? Perhaps it was because she had gone to bed hungry. If she made a simple-meal . . .

She moved as quietly as she could, opening containers, extracting utensils, arranging the permitted seventeen bites in a leaves-in-the-breeze spiral on the platter. It was a simple pattern, one she had composed and taught to her friends, to help them through meals when they were too distracted for the more complex patterns.

Certainly her concentration was poor tonight, but by closing her eyes and monitoring her breath carefully, she was able to complete her visualizations.

It helped that Sella did not wake. Meals had been uncomfortable aboard the *Incara*, with the Padiri shoveling carelessly at their food, then watching with covert contempt while the Nesopians completed their mealtime rituals.

Mirika felt so much better when she had eaten that she hardly noticed the cold as the moons set and the mountainside fell into full darkness. There was no sound from the trees below or from the mountainside above except, occasionally, the wind.

At last the sun rose over the mountains. Mirika stretched, then stood arrested when her glance swept over Sella's face and she saw the betraying twitch and flicker of the Padiri woman's eyelids.

Her first response was anger, blazing anger. Sella had said she never dreamed, but here was clear proof that she did. Stiffly, Mirika stood and watched until Sella's eyelids were still. Then she sat, heavily, and waited to see if it would happen again.

It did not. But Mirika was doubly wary that morning as they entered the trees. She was wary of the deep shadows and tall, heavy-barked trees. And she was wary of Sella. Unreasonably, she found herself wondering

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if Sella was a dream bleeder. That was nonsense, of course, the product of hunger and exhaustion. Dream bleeders only lived in children's tales.

Still one thing could not be denied. Sella had dreamed and she had not.

The morning was uneventful. Occasionally the wind drove the treetops in a stately dance. Long green quills rattled and released a sharp perfume. Twice Mirika and Sella crossed narrow streams. The water was cold and clear. At midmorning they paused and reported to the *Incara* by speaking into the recorders they wore clipped to their suits. There appeared to be nothing on the mountainside but the trees and themselves.

"There's nothing here," Mirika said finally. It was late afternoon and they sat on a boulder above a swiftly moving stream. "There's nothing here at all." At Sella's insistence, they had moved with elaborate caution all afternoon, long after it had become apparent that the trees not only felt empty. They were empty.

"Insects. There are insects." Paradoxically, Sella had grown ever more concentrated, ever more fanatically cautious with the passing hours. She seemed almost eager to find danger, as if it would bring some resolution.

Mirika shrugged, annoyed by Sella's tone. She didn't like being addressed as a child. She hadn't liked it in the morning. She hadn't liked it at midday. She didn't like it now. True, they had discovered bright-shelled beetles delving in the bark of the trees, tiny mites clinging to the quills, floaters and drifters riding the occasional breeze. But what harm were any of those? "They don't mean anything."

"They could be poisonous."

Mirika laughed. That was like a Padiri, looking for the worst, even among the insects. "Then why have none of them poisoned us? But if we want to be entirely safe, maybe your people can bomb the trees with defoliant. Like you bombed Pithicon. And afterward you can clean up with a broad-spectrum insecticide. So if any of these pretty little bugs *are* poisonous—"

Sella's shoulders stiffened. She turned a narrowed gaze upon Mirika. "You have been difficult all afternoon. If you are thinking of something foolish, Mirika—"

"What? Something foolish like catching a floater?" One of the pastel flecks hovered high above them, sunlight filtering through its parchment-thin wings. Mirika jumped up, one hand in the air, trying to entice the insect. She couldn't help herself. She had listened all afternoon to Sella's precautions. She had contained her rebellion until she could contain it no longer.

"Anything at all. Anything," Sella repeated in a low voice.

"And if I do?"

For a moment Sella's eyes blazed with anger. She stood too, one hand

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going to the holster at her waist, tightening on the grip of the char-pistol. Then she sat again, her face dark, barely controlled. "You're all alike."

Mirika's dark brows rose. "We're all alike, are we? Then tell me please—what *are* we like?" The floater was forgotten.

"Do you want to know? Childish. Impulsive. Superstitious. Unpredictable." Each word was a separate indictment, coldly enunciated.

Mirika's face burned. So that was what the Padiri thought of the Nesopians. "Perhaps that's better than being as you are, Sella."

"Oh?" Sella's colorless brows rose. "And how are we?"

"Ugly. Graceless. Insensitive. Hard. And you lie too. You lied to me yesterday. You—" She had held her tongue for too long. Now there was savage pleasure in every syllable.

"I barely spoke to you yesterday."

Mirika laughed. "But when you did speak to me, you lied. You told me you never dreamed. But I saw you this morning. You dreamed."

Abruptly Sella was on her feet again, her face so twisted that Mirika took an involuntary step back. "No more of this. Say nothing more to me until tomorrow. *Nothing*. Or I will not be responsible." One hand clenched on the grip of her pistol, she jumped from the boulder and plunged into the trees.

Mirika stared after her, perplexed, then perversely pleased. So it was true. What she had heard was true. The Padiri were afraid to dream! The most powerful tool any person had for choosing her path—and the Padiri were afraid to use it. Sella had proved it by running away.

And perhaps she hadn't even lied when she said she didn't dream. Perhaps Sella was so afraid of her dreams that she repressed all memory of them. Mirika had heard that sometimes, when people were too frightened by what they saw, they simply choked back the images and woke with no conscious memory of them.

As she had wakened today?

At that thought, all her pleasure fled. Could so foreign a thing have happened to her? Could she have dreamed and forgotten? She pressed one palm to her heart, frightened at the way it had begun to pound. Suddenly she did not want to be alone. Jumping down, she ran after Sella.

Those last days on the streets, the city dying around her . . . had she dreamed of that?

Her mother, her face swollen with the fever that killed her. Had she dreamed of that?

But she had trained herself to induce guiding dreams, not dreams of helplessness and pain. Had she failed? *How?* Distraught, confused, Mirika wished she had never spoken to Sella of dreams.

They spent the night in the trees. Sella leaned half-wakeful against

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a barked trunk, char-pistol in hand. Mirika sat the same way. She was so upset that she ate as Sella did, from the containers, with a single utensil. That satisfied the ache in her stomach, but she paid with nausea later.

Occasionally she drowsed, her head nodding, then snapping upright again. Occasionally Sella did the same. There were no dreams. Mirika was not sure she had the courage for them tonight.

Sometime during the night Mirika lapsed into an uneasy sleep. Later she woke with a start, not realizing at first what had disturbed her. Moonlight fell through the trees in silver needles. The air was cold and still. And Sella knelt before her, her features fixed and white, a mask.

Mirika gasped, fully awake now, frightened. "What—"

"Do you want to know why we don't dream?"

Mirika shrank back against the rough trunk. Sella's harsh whisper sent knives of ice through her. "I—"

"What do we have to dream of? Our homes burning? Our land being poisoned? Our children—" Her face twisted. "*My* children dying. You're younger than I am. Did you have children?"

"No. My mother—"

"I did. I had three children—all dead. Do you want me to tell you how they died?"

Mirika recoiled. "*No!*" Was she dreaming this? Desperately she hoped she was.

But the fingers that closed on her arm were real. So were the eyes that blazed into hers. "*And I don't want to dream about it,*" Sella said. "I lived it once. I don't want to live it again. *No.* And I won't. I never dream. *I never dream.*"

Mirika's lips trembled. Sella's fingers hurt her. "I—I must have been mistaken." What else could she say? "I thought you were dreaming. I must have been wrong." Certainly this was no time to suggest that Sella try to direct her dreams.

"You *were* wrong."

"Yes. Yes. I'm sorry."

For a moment Sella's eyes refused to release Mirika's. All the things she had not said were in those eyes. Then Sella was on her feet, running. She disappeared into the trees.

Trembling, Mirika hugged herself. Should she go after the Padiri woman? What could she say if she did? She had lost her mother, her home, her friends. But weighed against the loss of three children . . .

They both had lost everything. It was that simple. And Mirika had no comfort to offer. Recognizing that, she sat hunched against the tree until dawn, her thoughts cold and hurting. Finally she slept again.

When she woke it was almost midmorning and Sella sat nearby, food

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containers ranked on the ground beside her. Before her was Mirika's platter, morsels of food arranged upon it in a crude wheel. Sella looked up and for a moment her gaze was hard, penetrating. Then her thin features relaxed. "Here. This is how you arrange your food, isn't it?"

Mirika stared at the platter, at the five utensils Sella thrust at her. "Yes," she said in surprise, although it wasn't how she arranged her food at all. There was neither harmony nor balance in the composition. It was like a child's first platter.

Perhaps it was the best a Padiri could do. "Thank you," Mirika said, accepting it.

"You can't walk another day on an empty stomach. We'll reach the meadows today."

Mirika frowned, studying Sella's face. Sella was tired and pale, but there were no ashes left in her eyes. "It isn't so far, is it?"

"Not far at all. I reached the end of the trees last night."

"After you—after you left me?"

"Yes." Sella stared down at the food container she held in one hand. "Mirika, I know you aren't the one who did it."

"Who—"

"You didn't do any of it. You didn't release the missiles. You didn't fire the bombs. You didn't poison or burn or kill."

Mirika drew a tremulous breath. "I didn't do any of those things," she said. "I didn't give my permission for them to be done either." At least at first she hadn't. It wasn't hard, sitting there among the trees, to remember that her early horror had been as much for the harm the Nesopians were inflicting as for harm being inflicted upon them.

Of course that had changed after the trees at Pithicon were destroyed.

"Nor did I," Sella said. "I spoke out against it at first. I didn't understand why it was happening. I don't think I had one friend who understood either."

"It just happened," Mirika said helplessly. "Maybe someone somewhere knew why. I didn't. Except that—" Except that the Padiri, graceless and insensitive, had been so easy to hate.

"The easy course would be to hate each other."

Mirika glanced up warily, wondering if Sella had read her thoughts. "Yesterday I did hate you. Yesterday I think I did."

"So did I. But today—"

Mirika waited. Today—what? What had changed with today? Sella seemed almost solicitous this morning. Why?

Sella addressed her with a long, weighing look, then stared down at her hands. "You know why the Concordance insisted that we settle together, don't you?"

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Mirika frowned at the sudden change of topic. "I suppose they want us to learn to get along."

Sella shook her head. "No. They're throwing us together now, before we've rebuilt our technologies, so that if we try again to kill each other, we'll do no damage to the land."

"No damage? What do you mean?"

"I mean that if we live separately through these first years, if we build our cities and our weapons separately and then take up the war again, we'll do the same thing here that we did to Hadrikar-twain. But if we're forced to live together, the fighting—if it comes—will come during these first years, when we'll have nothing but char-pistols and farm tools to kill each other with."

Mirika recoiled. "That's—" Sickening. Revolting. Terrifying.

And true. It had to be true. She recognized that despite her revulsion. Why should the Concordance risk the destruction of a second inhabitable world? This one, preserved undamaged, could support some group with better control if they did not survive.

"If all our people knew that—"

"Would it make a difference? It was plain enough what we were doing to Hadrikar-twain." Sella's thin face tightened into a distracted frown. "You should eat if we're to go on this morning."

Mirika suppressed a moment's annoyance at Sella's instructive tone. "I'll be ready as quickly as I can."

The silence between them as they walked that morning was different from the silence of the afternoon before. Mirika found herself thinking often of what Sella had said about the Concordance. Each time she thought of it, she felt the heaviness of fear. *Somehow they had to live together. But on Hadrikar-twain, they had not even been able to live apart, in their separate lands.*

They walked slowly that morning. They found nothing more in the trees than they had the day before, except that once a black beetle with a single scarlet dot on its back crawled across their path. They watched its deliberate progress until it disappeared into a heap of fallen quills. Then they continued.

They paused at midday, just short of the edge of the trees, and this time Mirika arranged her own platter. She formed a pattern composed by a friend, sunlight-in-golden-shafts. The visualizations that accompanied it fell into a lazy rhythm, soothing her as she ate.

Sella watched with hooded interest. "What do you get from that?" she demanded when Mirika had completed the meal.

"From—"

"From all that . . . that fussing with your food?"

Mirika frowned, but she could see Sella didn't guess her question was

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offensive. *Insensitive; the Padiri were insensitive.* "I don't know if I can tell you. But the times when I don't make my meal well are the bad times. They're the times when I'm sick or afraid or hurried—or there isn't enough food to fulfill any of the patterns."

Sella shrugged and took her feet. "Just so long as you nourish yourself adequately, I suppose."

Biting her lip, Mirika packed her platter and utensils. Had she really expected a Padiri to understand?

They emerged from the trees a short time later. Emerged to a conflagration of green and yellow and lesser blazes of orange and red. The meadows rolled away from their feet, brilliant with blooming grasses. There were tall grasses, coarse grasses, fine grasses and grasses that hugged the soil. There were blossoms of every size, some incredibly delicate, some lush, flaunting their fat petals.

Mirika's immediate response was to cry with pleasure. The air was clear and singing. The soil had a rich resilience under her feet. And every blossom was a golden promise. *This was the place where they belonged.*

Strangely, Sella responded to the beauty of the meadows with returning tension. Her shoulders grew rigid and the lines of her face deepened. Periodically as they walked, she knelt and dug with a trowel from her pack. Each time the rich black soil crumbled beneath her probing fingertip, she frowned. The lacing of clear streams across the meadows seemed to trouble her even more. She stood beside them, her face bleak, her shoulders rigid.

Whatever she thought, whatever she felt, it did not dampen Mirika's mood. She paused beside a tumbling stream and heard sounds—not the sounds of water but the sounds of a settlement being raised. Gazing away into the distance, she saw children running in the sun, their dark hair glinting, their laughter shrill.

This was the place where they would live. She would bring wood and stone from the mountainside and build her own home beside one of the streams. Sturdy walls, wide doorways—there would be a courtyard as well, where friends could join her for meals. Oh, the patterns she would compose there . . . perhaps she could bring a sapling from the lower mountainside to shade her bedroom. And the grasses would bloom outside every window.

And those children who laughed as they played—at least one of them would be hers. She had wanted a child before, but her mother had asked her to wait. Now there was no reason to wait.

Would she grow her own foods? Or would there be community gardens? Mirika was wondering that when she realized that Sella was staring across the meadows, her expression bleak.

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Alarmed, Mirika followed the direction of her gaze. "Sella—what is it? Is there something—"

"There's nothing here," Sella said in a low voice. "We don't have to walk any farther to see that, do we? We've put our feet carefully for three days now. The mountain didn't slide down on us. Nothing attacked us as we walked through the trees. The ground didn't cave in under our feet. And here—"

Why wasn't she pleased? "We're safe," Mirika said. "There's nothing here to harm us. All we have to do is bring down our people. All we have to do—" She broke off in surprise as Sella raised a cautionary finger to her lips. "What is it?"

Sella shook her head. Frowning, holding Mirika's gaze with her own, she carefully removed the recorder from her suit. "Give me yours," she said silently, forming the words with her lips.

Confused, Mirika removed her own recorder and gave it to the older woman.

Sella raised one reassuring hand, then stepped toward the stream. "Let's go for a swim," she said—and threw the two recorders into the racing water.

Mirika stepped forward in surprise. "They'll be ruined!"

"Yes."

"If we can get them out quickly enough—"

"Leave them."

"But—"

"Leave them, Mirika. There is enough information on the tapes already. Now we need privacy to speak together."

Mirika stared at her, dumbfounded. "What—what do we need privacy for? After the things we said to each other yesterday—"

"We have different things to talk about now." Paradoxically, Sella's mood seemed suddenly to have lightened, as if she had reached a decision she had agonized over.

Mirika glanced again at the stream, at the drowned recorders. She did not understand. "What things?"

Sella drew a long breath, turning to gesture back over the meadows. "We need to talk about this. About what we'll do next."

Wasn't it obvious what they would do next? "We'll go back to the *Incara*. We'll tell the others it's safe to come down. We—"

Sella shook her head. "You don't see, do you?"

Mirika stared at her in astonishment. "I see everything," she said. "I see my home. Right here. I see the settlement. I see the gardens. I see the children playing. I see—"

"And the rest of it? The rest of what we brought with us?" Sella studied

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her. Then, surprisingly, she slipped one arm around Mirika's shoulders. "Don't worry. There's time."

"But—but there isn't," Mirika said, struck by an unwelcome thought. "You've ruined our recorders. Our transmissions have stopped. Trescott and Peers will call the explorer back."

"No, they'll think we forgot and wore our recorders into the stream. They'll give us time to get back to the explorer. A few days, surely."

Mirika glanced up the flank of the mountain. Sunlight glinted faintly from the explorer. "Maybe we should go now." She did not understand at all. If this had happened yesterday, she would have been frightened.

"No. We'll spend the night here," Sella said with finality. "Gather flowers if you want, Mirika. Or bathe in the stream. It will be dark in just a few hours and we can sleep. You Nesopians put so much faith in your dreams. Or so I've heard."

"We do."

"You base decisions upon them. All kinds of decisions."

"We do. But if—"

"Then perhaps you'll have a dream tonight. Perhaps then you'll see the same thing I see." She spoke calmingly, as to a child. "Now I want to be alone."

Reluctantly, perplexed, Mirika withdrew. She followed the stream deeper into the meadows, her head bowed. The sound of the water should have been soothing. It was not. And she no longer heard the sounds of a settlement building, of children playing. The meadows had grown silent.

Sella had guessed about the Concordance, had guessed why it had set the terms that it had upon their resettlement. Now she saw something here that Mirika did not. She wanted Mirika to find it in her dreams. Or so she had suggested.

But Mirika had not dreamed for two nights now. Or if she had dreamed, she had choked back all memory of it—as if there were something there so ugly, so unwelcome, that she could not bear it.

What could be that ugly? That unwelcome?

She turned back once and saw Sella sitting beside the water. She held a flower in her hand, a delicate yellow blossom. It was the first time Mirika had ever seen any beauty in her face.

The water was too cold for bathing, but Mirika briefly dangled her feet. Then she made a slow, careful meal in the soothing-breezes pattern she had composed under the trees at Pithicon as a child. And finally, when the sun was low in the sky and the air had begun to cool, she made her way back to where Sella waited. She thought, briefly, of returning to the explorer alone, tonight, while Sella slept, but decided against that.

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The sun set the horizon briefly ablaze, then vanished. Shivering, Mirika drew her bedding around her, pulling it forward to hood her face.

"The chanting you did the first night, Mirika— Was that a song of some kind?"

"No. It was one of the inductions I make to carry me into my dreams."

Sella nodded absently, as if she had already guessed. "Do it tonight if it helps. It was restful."

Mirika nodded, reluctant, but knowing she must at least reach for her dreams. She was self-conscious at first, too aware of Sella's presence to give herself fully to the induction. But after a while the syllables came more easily and she found herself slipping slowly into that other state of awareness. She stretched out on the ground, cushioned by the resilient soil, and let sleep overtake her.

The period of early sleep passed quickly, a flicker of darkness against her eyelids. Then the initial illumination of the dream state came.

The first dreams were of today: tall trees, a black beetle, running water . . .

The images ran swiftly, brightly, until her mind had sorted them to its satisfaction. When that was done, mid-sleep began. But tonight Mirika did not slide easily into that state. These last two nights she had let her guiding dreams slip past her. Tonight she must be watchful. She must be aware. Tonight—

Instead of slipping effortlessly into mid-sleep, she jerked awake. Gasping for breath, clutching at her bedding, she sat bolt upright—and found herself staring into Sella's face.

"What is it? What did you dream?" The Padiri knelt beside her. "Mirika, what did you dream?"

"Nothing," Mirika stammered, disturbed. She drew her fingers through her hair. "I—I must sleep again."

"Yes, sleep," Sella agreed, solicitously.

But Mirika did not. She curled against her covers. She closed her eyes. She murmured the necessary stanzas. And she remained stubbornly awake all through the deep hours of night, until finally Sella gave up her vigil. Soon after that the sun rose.

Stiff, unrested, Mirika threw off her bedding. Sella slept nearby, one fist clenched on her bedding. Mirika got up and went to the stream to splash her face, but nothing could wash away the quiet terror she felt.

A third night without dreams. The waking beauty of the meadows meant nothing now. Nor did the morning colors of the sky. She sat beside the water and felt only a frightening emptiness, as if her soul had fallen to ashes.

Sella did not wake until late morning. They made a silent meal, then changed clothing. Sella washed their soiled garments in the stream and

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spread them in the grass to dry. Mirika sat watching, thinking reluctant thoughts.

What if she never dreamed again? What if she chanted each evening and slipped into unremitting emptiness? Perhaps this entire world was a dream bleeder. Perhaps the rushing stream had carried her dreams away.

"Don't you think we should return to the explorer today?" she asked Sella when the Padiri woman had finished the laundry.

Sella studied her dispassionately, then glanced across the meadows. "No."

There was nothing to argue in that, not without sacrificing the equilibrium that had developed between them. Though why that equilibrium should depend upon Sella making the decisions and Mirika acquiescing . . .

Their early afternoon meal was as silent, as sparse as their morning meal. Afterward Sella busied herself taking samples of soil and vegetation. She worked silently, not encouraging Mirika to participate.

Mirika watched her for a while. Then she wandered to the streamside and folded the clothes Sella had left there to dry. Finally she lay down in the grass and stared up into the sky. She was tired, her thoughts ragged and disordered. If she could simply let them go for a while, if she could send them away on her breath . . .

She had not realized the sun was so bright. As she lay there, her mind emptying, it flooded her eyes with light: intense, yellow, blinding. Strange she had not noticed before how harsh it was. They would need protective lenses when they built their settlement. Otherwise their eyes would throb with the vivid light.

Their eyes would throb as hers did now. And she could not close them. She willed them shut, but they remained stubbornly open. She stared helplessly into the fiery light, confused, caught.

She could not move, but soon, very faintly, she heard the sounds of the settlement again. She heard people talking. She heard hammers, saws, and the heavy sound of logs being dragged from the mountainside. From somewhere there was the stamping and snorting of domesticated animals, the cry of fowl. And she heard children laughing.

Perhaps, she realized with quick elation, if she listened closely she would hear her own children. Surely she could pick their voices from the others. All she had to do was listen. Carefully, carefully . . .

But the voices of the children were changing. The voices of all the people were changing. They were no longer laughing, talking, planning. Suddenly they held an angry undertone, an accusing undertone—a threatening undertone. People had begun to shout. And there were other sounds. They came in swiftly gathering waves, distant at first, then

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crashing nearer. Mirika could not identify them, but her heart had begun to pound with fear. It did not matter what specific tools and implements made those sounds. Their cadence told the story.

So did the screams that suddenly trembled in the air. They hardly sounded human, those screams, but Mirika knew they were. She had heard so many just like them in the last days of the war. She had uttered her own. There had been entire days, entire weeks when her throat had ached with them.

As it ached now. The terror was in her, the terror of all those weeks and months and years. It was fresh, rekindled.

The fighting had begun again, but she could not move. She could not escape. She could not even turn her head. She was paralyzed, staring helplessly into the sun.

The burning sun.

No. It was not the sun that was burning. It was the settlement. The people who were fighting, the people who were screaming had set it afire. She smelled burning timbers, burning grains, burning cloth.

Burning flesh.

And burning grass. A sob caught in her throat, choking her. Had the fire spread so quickly to the meadows?

What was surprising in that? A single char-pistol could set a dozen fires in an instant, and there must be hundreds of pistols in the settlement. Who would dare live among enemies without one?

The grasses were burning. She had seen them as a blaze when she and Sella first emerged from the trees. Now they truly were a blaze. She did not need to move, to turn her head to know that. Every green stalk, every delicate flower was blackening. The turbulence of the conflagration already lifted ashes into the air. Huge vortices darkened the sun.

Mirika could not breathe. Her lungs were choked. Her eyes burned. If only she could get to her feet, if only she could draw her own pistol—

Yes, yes. If she could draw her own pistol, if she could turn its beam on the Padiri who were destroying the meadows, those bright meadows of light. They had destroyed her home. Her children. The trees. Now they were destroying the grasses and flowers and she wanted to see their faces burning. She wanted to see their hair in flame. She wanted—

The screaming had come nearer. It had come as near as her own throat, erupting with all the force of vengeance and terror. And her hand had begun to respond. It was inching toward her holster. Her hand— *There was a Padiri face before her, its hair a blazing halo.*

Then she was sitting upright, staring into Sella's eyes. And the meadows were just as they had been. The grasses were green, the sky clear. The sun was not a fierce, blazing presence. It was only a warm yellow disk.

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Mirika drew a trembling breath. So this was the dream she had not wanted to confront. And she understood why. It was not just because of the renewed hatred and terror the dream called up. Equally it was because she had ached for these meadows from the first moment she saw them. She had not wanted to deny herself them, not even for a day. But the dream told her she must.

Strange how clearly, how quickly her thoughts ran after a dream of such power.

"Tell me," Sella demanded.

She did not want to. She only wanted to open her mind and let the dream bleed away into the soil. Certainly she did not want to think of all the things that must be done, that must be endured before the meadows could be hers. But her mind was already making the swift, intuitive leaps that so often followed a guiding dream.

Her hand quivered a little as she pressed it to her temple. "I dreamed we built our settlement here," she said in a shaken voice. "It was beautiful and we were happy. *I* was happy. But the fighting began again. The houses were burned. The children died. The grasses burned. The grasses—" Her voice caught. She stared into Sella's face, reluctantly remembering the very last part of the dream. Remembering her struggle to draw her pistol. "I still hate you," she whispered.

Sella nodded, unsurprised. "I still hate you."

But no. That had been too bald. "Oh, Sella, not—not *you*. I still hate the Padiri. For what they did to us. For everything they destroyed. For—"

"For all the reasons I still hate the Nesopians. We taught each other to hate very well, didn't we? Do you think there is a Padiri aboard the *Incara* who can look at a Nesopian without feeling hatred?"

"I know—I know from talking with my friends that there are none of us who do not still hate the Padiri."

"But we have to live together for these next five years or we'll be returned to the camps. And there won't be another chance. We'll all die there."

Mirika nodded. Five years together or the camps and death. This world was their only chance.

But not this valley. Not yet. She knew that now. "We can't bring them here," she said. "We'll have to tell the Shipmasters something. I don't know what—"

"Something," Sella agreed. "We must find another place. A harder place. An uglier place. We must find a place our people can fight as they want to fight each other. A place they can turn all their hatred against. A place they can pound and slash and burn and scar. A place where they will have to do all those things just to survive."

Mirika frowned. She had not considered yet where they must go from

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here, but there was something in what Sella said. If they could dissipate their hostility against a common enemy during these five critical years, instead of against each other. . . . She considered what had happened to the other explorer crews. "When the sand tunnel opened up and Iryon fell—"

"Yes. Until then, he and Lara had hardly spoken. But when the crisis came, she tried to save him."

And she had died. "And when Kirrel was attacked, Phila tried too, even though she hated the Padiri."

Sella nodded. "But you saw what happened between us. Those first two days, I saw only an enemy in you. I hoped, when we entered the trees, that I would find something there to kill. Because every time I looked at you, the hatred came back. And you were so lax, so careless. I had to instruct you every step of the way. By the second afternoon, I was ready to draw on you simply because you reached for a harmless floater. It wasn't until I began to feel motherly toward you that I could trust myself."

She had been lax? Careless? If so, only because Sella had goaded her with her constant, nagging precautions. But Sella had said something even more surprising. "Motherly? You feel motherly toward me?"

Sella shrugged. "I was so angry that second night that I had to leave you alone. I was afraid I would hurt you. But when I came back, you were sitting asleep under the tree, and suddenly you looked so cold and so small that my feeling for you changed. You were no longer an enemy. You were just someone who couldn't care for herself properly, someone who had to be looked after. Just as Kirrel and Iryon became crew mates who had to be helped, in those last moments."

"I can care for myself very well," Mirika said stiffly, offended. "I. . . ."

"Is walking for two days on an empty stomach caring for yourself? Is having to sing yourself to sleep at night caring for yourself? Is—"

Carefully Mirika controlled her rising irritation. She could not permit anger to get the best of her. Not now, when she had just begun to see the necessary shape of the next five years. They must not quarrel. They must not fight. "Sella, you don't understand. You—"

"But I do, Mirika. My children were younger than you, but they knew how to care for themselves. And they certainly didn't wait for their dreams to tell them what to do. They knew better than to yield to that kind of superstition. If we can find a place harder than this, a place meaner than this, perhaps we can all turn our hatred against it, at least until we learn to care for each other. I have learned to care for you, after all, simply as a needy human."

Mirika drew a constricted breath. So that was how Sella saw her, as a child. Mirika stared down at the ground, quietly seething.

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But Sella's feelings had brought peace between them, hadn't they? At least for the time. Mirika had submitted herself to Sella's ministrations, however rebelliously, and they had spent four days together without harming each other. Mirika had even, for a few fleeting seconds, seen some beauty in Sella.

Five years . . . they must live together for five years before this world became officially theirs.

Mirika stood. "I understand, Sella. Do you think we should go back to the explorer now?" She spoke with careful deference.

"Yes, now that we've had a chance to talk this over. But we must decide what to tell the shipmasters."

Certainly they could agree on that.

As they made their way back up the mountainside, they discussed the kind of land they must find. The tropical forest where Kirrel and Phila had died might suffice. It was not ugly, but there was something in the trees they could drive back together. And there was the dense undergrowth to be cleared. Perhaps there were other dangers as well.

"We needn't look at the dunes again," Sella said on the second day, when they reached the explorer. "It was foolish to send a crew there in the first place. There was so little water and virtually no soil, only the dunes."

"But they were beautiful," Mirika said softly, remembering the golden sand.

"We have no need for beauty now," Sella reminded her briskly. She did not even look back over the meadows before she approached the explorer. "I'm pleased you saw the same thing I did after your dream, Mirika," she said, pausing at the hatch. "It has made my job so much simpler."

Her job—to decide what they must do and how they must do it, with token deference to any small suggestion of Mirika's—provided it agreed with her own plan. Mirika nodded briefly. "I am glad too, Sella." Her tone must have been convincing, because Sella boarded the explorer without another word.

Left alone, Mirika frowned to herself as she gazed back over the meadows. Frowned because Sella had never even asked her what she had concluded from her dream. Never. She had simply listened to a bare outline of its events and then assumed that the two of them had reached the same conclusion: that they must find a hard land.

And that was not what Mirika's dream had told her at all. Her dream had told her how fragile the beauty below was—and how vulnerable. Her dream had told her that they must purge themselves completely of hatred and of fire before they built their settlement in the meadows.

Because the meadows themselves were a dream—fragile, bright, beck-

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oning. They were a dream of the future they could one day own if they conducted themselves carefully.

The meadows were a dream they must hold before themselves each night through these next difficult years.

A dream . . . when Mirika reached the *Incara*, she would ask her friends to help her compose stanzas to keep the dream bright. The stanzas would spread quickly among the Nesopians aboard the *Incara*. Soon everyone would dream of the meadows. And she had already devised several new platter patterns to commemorate the land that would one day be theirs. She would call her most intimate friends to dine with her tonight. The Padiri would watch and never guess what the Nesopians promised themselves through the intricate patterns on their platters and the intense visualizations they invoked while they ate.

Mirika glanced toward the explorer. What would Sella's reaction be if Mirika told her those things? Mirika could imagine the brisk way the Padiri woman would brush them aside.

A child, fussing over her food . . .

Yes, that rankled. Frowning into the sunlight, Mirika recalled the last moments of her dream. Recalled her struggle to draw her pistol. Recalled the force of her hatred and how she had ached to release it. Recalled the Padiri face with its burning aureole of hair.

She and Sella had learned to get from day to day together. On their climb back to the explorer, Sella had shown Mirika a brisk, overbearing kindness and Mirika had accepted it meekly. If the Nesopians were disciplined, if they were assiduous, their two peoples could achieve the same equilibrium. It would be distasteful. There would be times when they ached to revolt. But it need only be for five years, until the Concordance resettlement team made their inspection and granted them final title to the world.

Five years. A long time for a proud and sensitive people to subjugate themselves. But at the end of five years they could leave whatever hard, ugly land the Padiri had chosen for them all. They could leave the settlement and come here to claim their homeland. And if the Padiri would not release them peacefully—

Mirika's hand went to the grip of her char-pistol. If the Padiri would not release them peacefully, there was the fire. The fire that had blazed in those last moments of Mirika's dream. The fire all those complaisant children would release from the very bowels of their dreams. It would be a surprise, wouldn't it? It would be completely unexpected, because the Padiri would never deign to master the language of dreams and rituals, no matter how loudly it was spoken all around them, no matter how rebelliously.

Mirika shivered, wishing she could deny that part of her dream. But

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that would be to destroy the integrity of the entire dream—the dream that had told her so clearly that they must not return to the meadows with hatred in their hearts.

In extremity, there was one certain way to purge themselves of hatred. That was to purge themselves of its object.

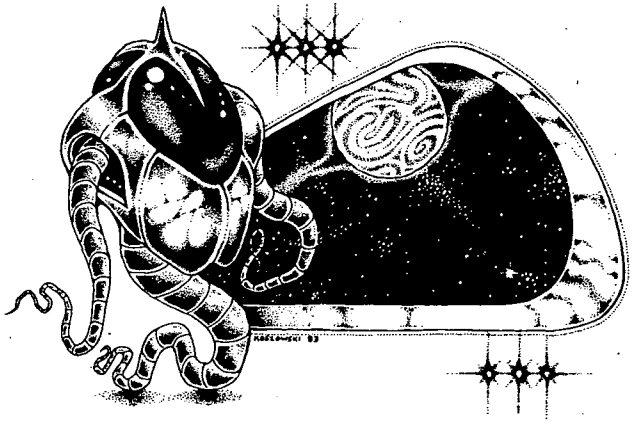
Perhaps that was why Shipmaster Peers had looked at her with pity when he had refused to strike her name from the crew list. Because she was to be the first to host this fiery dream of their future.

"Mirika, are you coming?" The familiar tone: brisk, parental, unconsciously condescending.

Mirika stooped and scooped a handful of pebbles from the ground. "I'm coming, Sella." Another familiar tone: obedient, willing, every hint of rebellion carefully concealed. Mirika gazed over the meadows for a moment longer. Then she climbed into the explorer. When Sella glanced her way, she smiled. "I'm ready, Sella. I just wanted to gather a few rocks to show my friends." *Childish, unpredictable, impulsive . . .*

The meadows blazed in the sun as they lifted away.

Dreams were not to be denied. ●



MARTIN GARDNER (from page 115)

SECOND SOLUTION TO BULL'S-EYES AND PRATFALLS

All the remarks were made by Thomas Edison. I found the first three in *The Experts Speak* (cited earlier), and the fourth in a section on predictions in *A Random Walk in Science*, compiled by R. L. Weber (1973).

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ON BOOKS

by Baird Searles

Black Star Rising
By Frederik Pohl
Del Rey, $15.95

It all started when Pettyman Castor stepped on the severed head while planting rice at the Heavenly Grain Village Collective near Biloxi in the Bama Autonomous Republic. As it turns out, the head is not all that important, being the by-product of a murder committed at a nearby collective. The victim was a criminally irresponsible type who wrote things such as "Chinese Go Home" on walls.

But, in Frederik Pohl's latest novel, *Black Star Rising*, this is the beginning of an odyssey for Pettyman Castor from rice planter at the Heavenly Grain Village Collective to the presidency of the United States. The problem is that the United States no longer exists.

After the U.S. and the U.S.S.R. had knocked each other out in a destructive exchange of missiles, India and China more or less inherited the Earth, with China getting the Americas. The surviving population was minuscule; China brought medicines and order, ruling benificently while remodeling what was left of the U.S. society in its own image.

Pettyman Castor is something of a hunk, and is taken up by Tsoong Delilah, the Han Chinese Police Inspector assigned to the case. He is soon installed in her apartment in New Orleans, where he attracts the attention of "Manyface" Fung Bohsien. "Manyface" has part or most of the brains of ten other human beings installed in his own skull and is high in the Han Chinese scientific and political circles. He employs Castor as an assistant.

An interstellar vessel appears, and broadcasts from space that the Chinese must leave America or suffer the consequences; what's more, they will only negotiate with the president of the United States. The ruling Chinese look around, fasten upon the nearest likely "candidate," who is Pettyman Castor, and presto chango, he's president of the United States.

He goes up to negotiate, with Tsoong Delilah and a stowaway rebel who is gung-ho to return America to the Americans. This unlikely trio is kidnapped to the planet of origin of the intruding ship. It seems that an interstellar colonial vessel from America had been en route when the war broke out; the colonists have established

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a sort of superpatriotic America-in-exile, in a symbiotic relationship with an alien race called erks, who look like cat-sized insects.

Total confusion results, since the refugee culture has only a dim idea of what has happened on Earth in the last hundred years, Castor and his party have *no* idea of what's going on, and the erks are busily misunderstanding both sides. And even more chaos results when they all go back to reconquer America.

Frederik Pohl has seldom if ever been able to subdue his tendency toward satire; it's probably that very fact that established his reputation back in the 1950s. It should be obvious from the above that *Black Star Rising* is no exception. Once the Sino-American culture is firmly established (this is the kind of thing Pohl is a whiz at), the tongue gets tucked in the cheek, culminating in his mad portrait of the jingoistic American society transplanted to another world with only the vaguest recollection of what America was.

Pohlsters and others who like their stories speedy and none-too-serious will have a grand old time.

A Matter of Time
By Glen Cook
Ace, $2.95 (paper)

Do you remember the thrill of first reading Heinlein's "By His Bootstraps," the incredulity at the demonic cleverness of it? (And what a teleplay that would make, come to think of it.) And that was small-time stuff. There was the big-time stuff that took one's breath away by the epic audacity of its concepts, such as Asimov's *The End of Eternity* (still probably my favorite of his works) and, yes, Leiber's *The Big Time*. They certainly gave you the time of your life.

These are milestones in the subgenre of the time-travel puzzle story, but lately no one seems to have timed things right. Take *A Matter of Time* by Glen Cook.

In 1975, in St. Louis, a man's body is found, so recently dead that his body heat had melted the snow in which it is lying. The clothes of the corpse are fifty years out of date, as is its hair style. The coins in its pockets are collector's items.

A dead-end mystery, it begins to obsess Detective Norman Cash. In his investigations beyond the call of duty, he learns that a house near which the body was found has been occupied time out of mind by one little old lady, who has lived there beyond the memory of every inhabitant in the neighborhood. And that fifty years ago, she had been accused of murdering her lover, who had been seen entering the house but who had, apparently, never left it.

Could the corpse be out of time? The major story line follows Cash's exhaustive and complex investigations—these chapters are all labeled "On the Y Axis . . ." Then there are curious, seemingly irrelevant chapters labeled "On the Z Axis . . ." and "On the X Axis . . ." having to do with a Middle-European totalitarian state of the next

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century, and a small town in Poland in the 1800s.

The answer to the above question is, surprisingly, *no*, but time travel *is* involved. A "tachyon storm" in the 21st century has thrown five persons back 200 years to occupy living bodies of the past, therefore setting in motion a chase through our own time and the probable changing of the future. While the details of the contemporary detective's piecing together the fragments of all this keeps one reading, the end picture is pretty muddled. Writing about time travel and its paradoxes has to be crystal clear; here the reader ends up feeling that *something* is out of joint.

An Embarrassment of Riches
By James Howard Kunstler
The Dial Press, $15.95

Everyone knows about the Lewis and Clark expedition sent out by President Jefferson in 1803. But did you know about the Walker expedition of the same year, commissioned by Jefferson to search out live specimens of the giant ground sloth, the *Megatherium*, in the wild western regions of Tennessee and the newly-purchased Louisiana Territory? I thought not.

In its never-ending search for books off the beaten track, this column has come up with some pretty strange specimens, but few quite so wacko as *An Embarrassment of Riches* by James Howard Kunstler. The categorization on the galleys I received calls it historical fiction, but history, quite literally, was never like this.

The Walker expedition consists of William Walker, the pre-eminent botanist of the New World (discoverer of 1,488 new species) and his naive nephew, Sammy, who chronicles the trip. They are sent out by Jefferson in indignation at a French scientist's claim that American animals, in comparison to those of the Old World, are "feeble and dwarfed." Since remains of Megatherium have been found in the Americas (it did, indeed, survive nearly to historical times), Jefferson determines that one should be found in the unexplored "West."

There the Walkers encounter, along with relatively mundane bloodthirsty Indians and river pirates (one of whom was raised, Mowgli-style, by wolves), some pretty peculiar people, places, and things. Among them is, in a wide stretch of the Tennessee River, a floating storybook castle, furnished in the most exquisite French taste. This establishment is run by a French duke, a refugee from that country's revolution. It contains (along with the priceless furnnishings): a vast collection of black slaves which he has trained to act Shakespeare by rote in whiteface, and to play symphonic music (the expedition's boat is welcomed by Handel's "Water Music"); an army of Indians who also act as audience for the music and drama; and Louis XVII, the "lost Dauphin" of France

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who has been spirited to the Americas.

This daft menage, however, is nothing compared to the lot that uncle and nephew run into further south, in the swamps near the Spanish colony of Florida. This bunch is a tribe of white barbarians who speak in iambic verse ("We are the Wejuns, like no other men; pale skin, blue eyes, fair heads, as thee mights ken.") and bear names such as Jack-a-merry, Peaseblossom, Moth, Bugabear, and Cobweb. They may or may not be descendants of the disappeared colonists of Roanoke, and Sammy leads them in a foray against their oppressors, the Spanish of Florida, with disastrous results.

Do William and Sammy, after all this, find Megatherium? Well, we know that Megatherium had been extinct for millennia by 1803. Don't we?

An Embarrassment of Riches comes close to whimsy, but escapes it by Kunstler's straight-faced 19th-century style, and a certain amount of brutality (his Indians are not exactly the Rousseauian noble savages we're used to; to them, warfare is "the very essence, the animating principle, of life itself."). Fantasy laid in America has often seemed flat, since our culture has no age-old mythology in which to base it. Kunstler has attempted here to substitute American folklore and the tradition of the tall tale. It's certainly an engaging experiment, if not a wholly successful one.

Walk the Moons Road
By Jim Aikin
Del Rey, $2.95 (paper)

Who is Jim Aikin, and out of where did he pull such a good first novel as *Walk the Moons Road*? (Yes, I know that he has published short fiction in this magazine, but short fictioneers do not necessarily novelists make.) There's nothing so edifying for a reviewer as to find a promising first novel (there are first novels that are good but not promising and first novels that are promising but not good); to coin a cliché, it gives one hope.

As a matter of fact, the publicity blat on the galleys informs us that Aikin has done most of his writing for the music world. *Not* the rock music world, however, so don't expect one of those hip, punk jobbies that seem to result when rock and SF cross. *Walk the Moons Road* is a good, solid piece of action SF, with a good, solid alien planet background with enough originality to make it fresh.

The cultures of this (unnamed) world center around the Island Sea, and it's big and there are a lot of them. Most are human, varied through mutation, but there are also two unhuman races, keeping their cultural identities but dominated by the humans.

Through mention of the World's folklore, one gathers that it was settled by Earth stock, who for one reason or another then forgot their origins.

The Vli are known as traders but are notably xenophobic and secre-

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tive about their home island. It is said that they have a third sex, the liliths, who mate with both the usual sexes of the Vli; this is usually discounted as legend, since no such creature has ever been seen, but when a real lilith arrives at the port city of Falnerescu, all hell breaks loose.

Tarag, an independent and likably cynical sea captain, makes a tavern vow that he will see and talk to this creature. The Falneresc garrison of the Berkenden Empire, the major military power of the Island Sea, is in an uproar, since the lilith has come to negotiate a treaty with them against the expansion of the barbarian Potheqi giants of the South. And there are other factions interested in the lilith and what can be done with "her."

Things get totally out of hand when Zhenuvnili, the lilith, decides to take off on "her" own without telling "her" compatriots, just as Tarag schemes his way into the Vli compound and another group mounts an armed attack on the Vli to kidnap Zhenuvnili. From there on, it's nonstop confusion as each faction plays "find the lilith" and everyone misreads everyone else's actions and motives.

Things bog down a little in the middle, as the myriad characters take off in all directions on mistaken assumptions, but Aikin pulls it back together for a thoroughly satisfying conclusion. Tarag is a charming scapegrace hero, and Zhenuvnili a "heroine" that is not exactly the standard model (though perhaps too little is made of her sexual oddity; despite the facts that we are given, "she" is portrayed as more or less feminine).

The finalé takes place on a ship in transit, which is almost a sure clue that there will be further adventures in the world of the Island Sea. Mr. Aikin has left enough room there to make one anticipate them with pleasure, for a change.

The Book of Kells
By R.A. MacAvoy
Bantam, $3.50 (paper)

R.A. MacAvoy's star has risen meteorically (if a star can be a meteor) in only a couple of years since her first eccentrically captivating novel, *Tea with the Black Dragon.* So far, her major characteristic, like C.J. Cherryh, is that the only thing to expect from her is the unexpected.

For instance, there's calling her new novel *The Book of Kells,* which has something of the *hubris* of naming one's novel *The Gutenberg Bible.* (*The Book of Kells* is an Irish illuminated manuscript of the four Gospels, one of the great treasures from the Middle Ages.)

It begins in a bog. From there it proceeds to a naked, screaming young woman suddenly emerging from John Thornburn's bathroom in the house in which he lives alone in Dublin, and barricading herself in his bedroom.

John, being something of a helpless type, calls Derval, his (sometime) mistress, who is by way of being an expert in Celtic lore and

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language. This is fortuitous, since the girl (she is in her mid-teens and named Ailesh) has just seen her community pillaged by Danes, and has herself been raped. She is from just about a millennium in the past.

John and Derval discover that he has set up a sort of time gate by tracing the convoluted Celtic designs on the remains of an ancient cross (found in the opening bog) while listening to a recording of ancient Celtic pipe music. They re-establish the gate, go back with Ailesh, and find themselves trapped as the Danes break the original of the cross.

Now these moderns-caught-in-the-past stories can vary from the most casually researched (bash a Gaul, throw in a toga, and mention a famous person—"I say, wasn't that Caligula?"), which can be fun, to an exhaustive recreation of an historical period and its interface with a 20th-century mentality. *The Book of Kells* is of the latter sort—Sharon Devlin is credited with providing MacAvoy with much of the historical material (and presumably is the Sharon to whom the novel is gracefully dedicated—"more Sharon's than mine") and has certainly done a bang-up job.

No amount of historical research, of course, can make a good story; this MacAvoy has supplied in spades. Her odd trio gets the hell out of the vicinity of the rapacious Norse (forget your noble Vikings—these are Not Nice People), taking with them the only other survivor, an uppity young poet, and set off for Dublin to plead with the High King. He, too, is a Norseman—Ireland is just about conquered by the "Danes" at this point—but is supposedly committed to upholding law and order for his subjects, at least those that pay him tribute.

Before you can say "Cuchulaine," the fugitives from the 20th century and their Irish friends are up to their ears in unlikely events, including a sort of sit-down protest fast by the poet on the King's doorstep, a cattle feud (a form of strife not confined to the Old West), a sword-and-scimitar fight between two Moslems in a Dublin waterfront bar (sea trade was *very* international in those days), and an appearance by St. Bridget or possibly her older manifestation, the Mother Goddess.

There's a cameo appearance by the Book of Kells (John drags it back to modern Dublin briefly), and all sorts of intrigue, adventures, and battles. And despite some initial annoyance with the protagonists (John is a wimp and Derval is a bitch, which is okay except that MacAvoy lays on the characteristics with a trowel), I, quite frankly, was very sorry to see their adventures—and the book—come to an end. And there are precious few novels a reviewer will say *that* about.

Nit-picker's note—Ms. MacAvoy's people blush too much, sometimes every one or two pages. "Derval felt an embarrassed heat

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over her face." (p. 112). "Derval's face heated again with blushes." (p. 113). "She felt her face grow hot . . ." (p. 115.) "Derval found herself blushing." (p. 175). "She felt herself blushing." (p. 177). ". . . he dissolved in blushes." (p. 179). "Derval blushed furiously . . ." (p. 186). It's one of those minor details that should be meaningless but which gets to you if you start noticing it.

The Moon Maid & The Moon Men
By Edgar Rice Burroughs
Ace, $2.75 each (paper)

Are the heroic hero and the pure heroine gone forever? Don't you secretly ever long for the moment when the latter is attacked by the savage tor-ho, screaming its hideous screams and baring its terrible fangs, to be saved by the former, who is rewarded by (at best) a chaste kiss and the admission, usually at the end of the story, of love?

Then return to Edgar Rice Burroughs, and if you know the Barsoom, Pellucider, and Tarzan canon by heart, grab the little-known Moon series, now back in print after an absence of some time. (Originally a trilogy, the third short novel, "The Red Hawk," is included with *The Moon Men* in this edition.) Originally published in the mid-1920s, they have the added bonus of (in *The Moon Men*) some pretty original stuff, for the time and for Burroughs, for that matter, who did not often stray from his formula (endearing though it was).

The Moon Maid is Nah-ee-lah, who is pure enough and beauteous enough to hold her own with the incomparable Dejah Thoris and the inexhaustible Jane. She lives in the Moon. That's right. *In* it. You see, while the outside of our Moon is indeed barren, it is a hollow globe; entrance to the inside space, 250 miles down, is gained through the mouths of the craters, and in there are seas, air, and inhabitants. Though this is purest nonsense by present day science (and was probably so even when Burroughs wrote), so what? Like so many of his ideas, it's one you wish were true.

All this is discovered by one Julian, who has set out in the 21st century on the first manned flight to Mars—or Barsoom. Yes, indeed, Burroughsians, it's the Barsoom we know and love; Earth and Hellum have been in radio contact for years. But as is wont to happen in ERB's novels, something goes awry. In this case a rebellious crew member who has it in for the noble Captain Julian attempts to crash land them on the Moon, but luckily they fall into a crater, drop 250 miles, and voila! A teeming world, full of exotic flora, fierce fauna (the tor-hos), nasty inhabitants, and of course, Nah-ee-lah, daughter of the Jemadar of Laythe, who has to be rescued from one thing or another for the entire length of the plot.

This is formula Burroughs, certainly, but *The Moon Men* is something different. Earth is conquered by the villainous faction of the

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Moon's inhabitants; a bit of atypical social significance here, since they are represented as descendants of the mob who brought down the civilized aristocracy of the Moon (an obvious slap at the Russian revolution, recent history as Burroughs wrote). They reduce the Earth to their own level of barbarism (they only got here through a renegade Earthling), and the novel is a life-among-the-ruins, conquered America story certainly as good as many that are being written today. The final short novel, "The Red Hawk," takes place 400 years after the conquest, with humanity having adapted the life style of the plains Indians and finally winning back their land from the Lunarians once and for all.

So take a pure heroine (or hero) to bed. *The Moon Maid* and *The Moon Men* make great late night reading.

Shoptalk . . . There have been some recent books *about* science fiction which deserve noting. *The Magic Labyrinth of Philip Jose Farmer* by Edgar L. Chapman is one of the Milford Series on "Popular Writers of Today" (Borgo Press, $4.95, paper). *Patterns of the Fantastic II* edited by Donald M. Hassler is No. 3 of the Starmont Studies in Literary Criticism, devoted to selected papers presented at the 41st World Science Fiction Convention (Starmont House, $8.95, paper). *The Annotated Guide to Fantastic Adventures* by Edward J. Gallagher is an exhaustive story-by-story (with plot synopses) index of the grand old pulp magazine (which Gallagher characterizes as being devoted to "slightly nutty juvenile fantasy"). Your reviewer got a slightly glazed look of nostalgia on coming across mention of "Toka and the Man Bats" by one J.W. Pelkie; it was his first issue of FA and the sense of wonder was strong. (It had to be, to digest stories like that one.) (Starmont House, $9.95, paper) And finally, there's *Samuel R. Delany*, a biographical and bibliographical study by Seth McEvoy (Ungar, $12.95 cloth, $6.95 paper). Recent publications from those associated with this magazine include: *The Edge of Tomorrow: Scientists Past and Future* by Isaac Asimov, Tor, $15.95; *The Great Science Fiction Stories 13 (1951)*, edited by Isaac Asimov and Martin H. Greenberg, DAW, $2.50 (paper); *Child of Fortune*, a novel by Norman Spinrad (Bantam, $16.95).

Books to be considered for review in this column should be submitted to Baird Searles, % The Science Fiction Shop, 56 8th Ave., New York, N.Y. 10014. ●

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SF CONVENTIONAL CALENDAR

by Erwin S. Strauss

The con(vention) pace doesn't slow down much this month, with two five-con weekends on tap. Make plans now for social weekends with your favorite SF authors, editors, artists and fellow fans. For a later, longer list, an explanation of cons, and a sample of SF folksongs, send me an SASE (addressed, stamped #10 (long) envelope) at 9850 Fairfax Sq. #232, Fairfax VA 22031. (703) 273–6111 is the hot line. If a machine answers, leave your area code & number. I'll call back on my nickel. Early evening's usually a good time to call cons. Send an SASE when writing cons. Look for me at cons behind the big, iridescent "Filthy Pierre" badge, playing a keyboard.

OCTOBER, 1985

18–20—**FantastiCon.** For info, write: **Box 781, Red Bluff CA 96080.** Or phone: **(916) 529–2636** (10 am to 10 pm only, not collect). Con will be held in: Redding CA (if city omitted, same as in address) at the Red Lion Inn. Guests will include: Robert Vardeman, David Gerrold, James P. Hogan, Reginald Bretnor, R. Faraday Nelson, Dean Ing, Somtow Sucharitkul, Tim Powers, Nancy Etchemendy.

19–20—**FallCon. (904) 374–8593.** University Centre Hotel, Gainesville FL. Piers Anthony, D. Sim.

25–27—**MileHiCon. (303) 934–7659/936–4092.** Denver CO. Sucharitkul, Ed Bryant. SF folksinging.

25–27—**RoVaCon. (703) 389–9400.** Civic Center, Roanoke VA. Richard Pini, Hal Clement, Michael Banks, M.A. Foster, Kelly Freas, A. Wold, James Allen, F. D'Ignazio, Paul Dellinger, Dick Preston.

25–27—**ICon, Box 525, Iowa City IA 52244.** Coralville IA. Joe Haldeman. At the Abbey Inn.

25–27—**NecronomiCon, Box 2076, Riverview FL 33569.** Robert Bloch, Roger Zelazny, Andre Norton, Robert Adams, K. Mitchroney. Cabaret, costumes, pajama party, vampire pageant. At the Holiday Inn.

26–27—**BeneluxCon, Postbus 1189, 8200 BD, Lelystad, Netherlands.** Leiden's Nieuw Minerva Hotel.

31–Nov. 3—**World Fantasy Con, Box 27201, Tempe AZ 85282. (602) 968–5673.** Evangeline Walton, Stephen R. Donaldson, C.Q. Yarbro, V. Poyser. Awards banquet. The fantasy fan's WorldCon.

NOVEMBER, 1985

1–3—**NovaCon, c/o Poole, 86 Berwood Farm Rd., Wylde Green, Sutton Goldfield, W. Midlands, B72 1AG, UK.** Coventry, England. James ("Dream Millennium") White, Dave Langford. Fifteenth annual con.

1–3—**NovaCon; Box 41, Marietta PA 17547.** Samuel R. Delany, Somtow Sucharitkul, Richard (Elfquest) Pini. Occult/ESP guests. Participatory murder mystery: "Who Killed Papa Smurf?" 3rd annual con.

8–10—**Xanadu, Box 23281, Nashville TN 37202.** R. Asprin, W.A. (Bob) Tucker. Nothing before noon.

8–10—**SciCon, Box 9434, Hampton VA 23670.** Virginia Beach VA. Harlan Ellison, Stephen Hickman, Phil Foglio, Polly & Kelly Freas, A. Hlavaty, Kay Reynolds, Colleen Duran, Curt Harold, Bob Zentz.

8–10—**ConClave, Box 2915, Ann Arbor MI 48106.** Plymouth MI. Poul & Karen Anderson, Mark Evans.

8–10—**TzarKon, 1040 McKnight Rd., Richmond Hts. MO 63117 (314) 991–1743.** St. Louis MO. W.F. Wu.

8–10—**OryCon, Box 5703, Portland OR 97228.** S. Sucharitkul, Steven Barnes. At the Hilton Hotel.

15–17—**ConCon, c/o Plaskon, 390 Alcatraz, Oakland CA 94618.** Conference for convention organizers.

AUGUST, 1986

28–Sep. 1—**ConFederation, 2500 N. Atlanta #1986, Smyrna GA 30080. (404) 438–3943.** Atlanta GA. Ray Bradbury, fan/editor Terry Carr, B. (Slow Glass) Shaw. The WorldCon for 1986, back in the USA.

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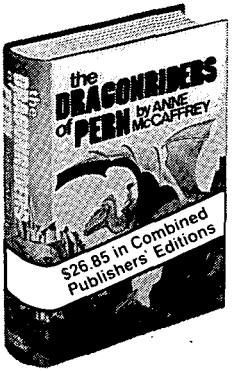

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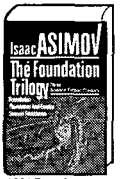

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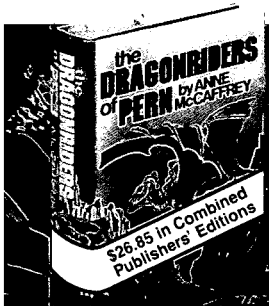

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